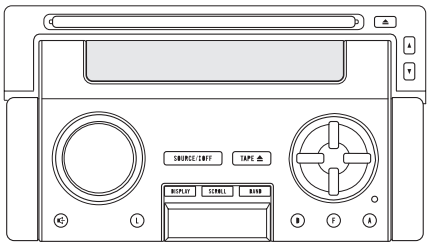
Service Manual



ORDER NO.
CRT2413

MULTI-CD CONTROL DSP HIGH POWER CD CASSETTE PLAYER WITH FM/AM TUNER

FH-P8800 UC,ES

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-631	CRT1640	2L	Cassette Mech. Module:Circuit Description, Mech.Description, Disassembly
CX-916	CRT2300	S8	CD Mech. Module:Circuit Description, Mech.Description, Disassembly

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CONTENTS

1. SAFETY INFORMATION 2
2. EXPLODED VIEWS AND PARTS LIST 3
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM ...14
4. PCB CONNECTION DIAGRAM 38
5. ELECTRICAL PARTS LIST 60
6. ADJUSTMENT.....73
7. GENERAL INFORMATION 78
7.1 DIAGNOSIS 78
7.1.1 TEST MODE 78
7.1.2 DISASSEMBLY 82
7.1.3 PCB LOCATIONS 89
7.2 PARTS 90
7.2.1 IC.....90
7.2.2 DISPLAY 104
8. OPERATIONS AND SPECIFICATIONS.....105

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PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

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K-ZZS. OCT. 1999 Printed in Japan

● **CD Player Service Precautions**

1. For pickup unit(CXX1285) handling, please refer to"Disassembly"(Page 82).
   During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
3. Please checking the grating after changing the service pickup unit(see page 76).

1. SAFETY INFORMATION

CAUTION

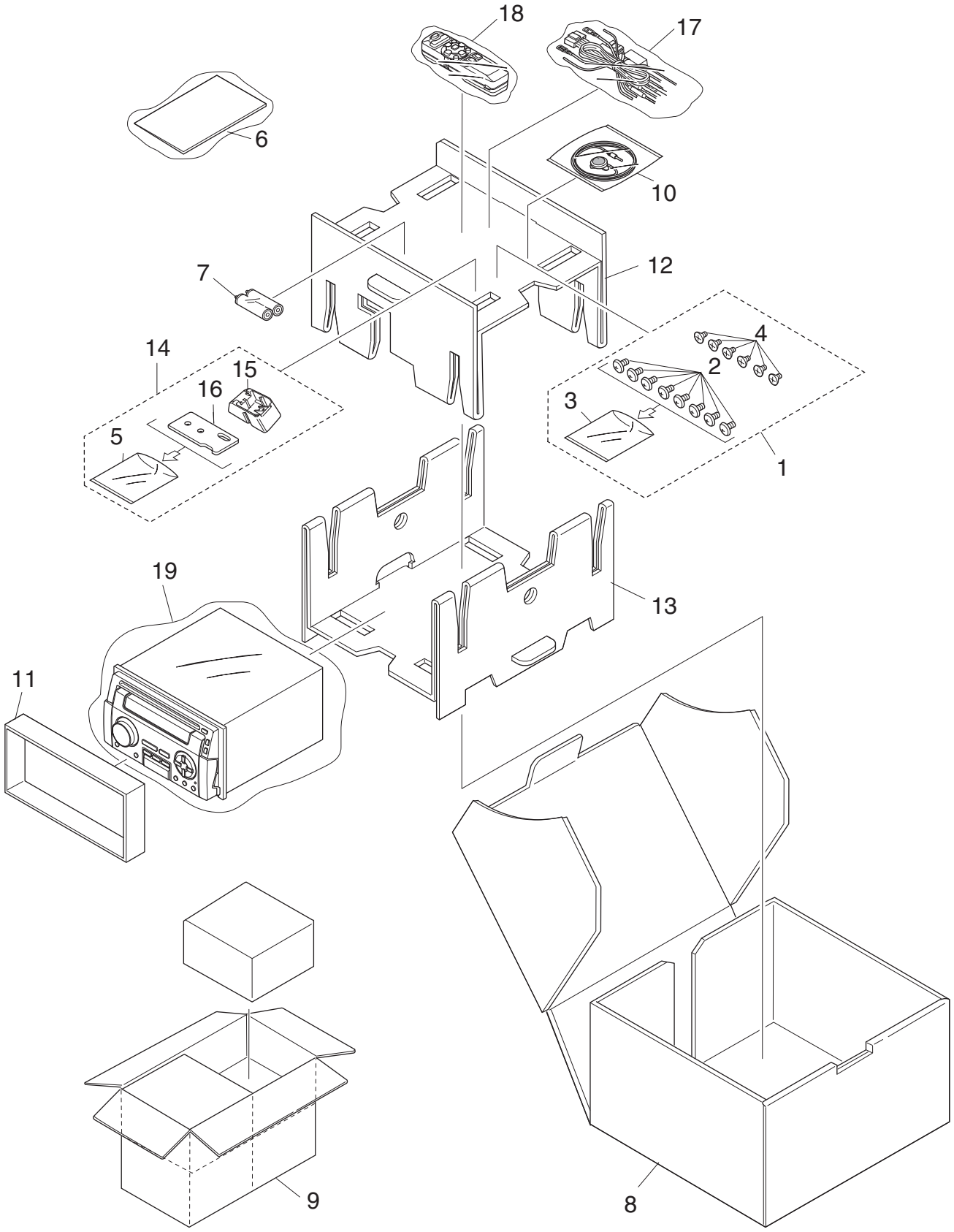
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING



NOTE:

● Parts marked by "*"are generally unavailable because they are not in our Master Spare Parts List.

● Screws adjacent to ∇ mark on the product are used for disassembly.

(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw Assy	CEA2189
	2	Screw	BMZ50P060FMC
*	3	Polyethylene Bag	CEG-127
	4	Screw	CMZ50P060FMC
	5	Polyethylene Bag	CZE3188
	6-1	Owner's Manual	See Contrast table(2)
	6-2	Installation Manual	See Contrast table(2)
*	6-3	Card	See Contrast table(2)
	6-4	Polyethylene Bag	CEG1116
	6-5	Panel	See Contrast table(2)
	7	Battery	CEX1006
	8	Carton	See Contrast table(2)
	9	Contain Box	See Contrast table(2)
	10	Microphone Assy	CPM1022
	11	Protector(front)	CHP2229
	12	Protector(upper)	CHP2227
	13	Protector(lower)	CHP2228
	14	Base Assy	CEA2426
*	15	Base	CNS5031
*	16	Sheet	CZA3371
	17	Cord Assy	CDE6179
	18	Remote Control Assy	CXB3877
	19	Cover	See Contrast table(2)

(2) CONTRAST TABLE

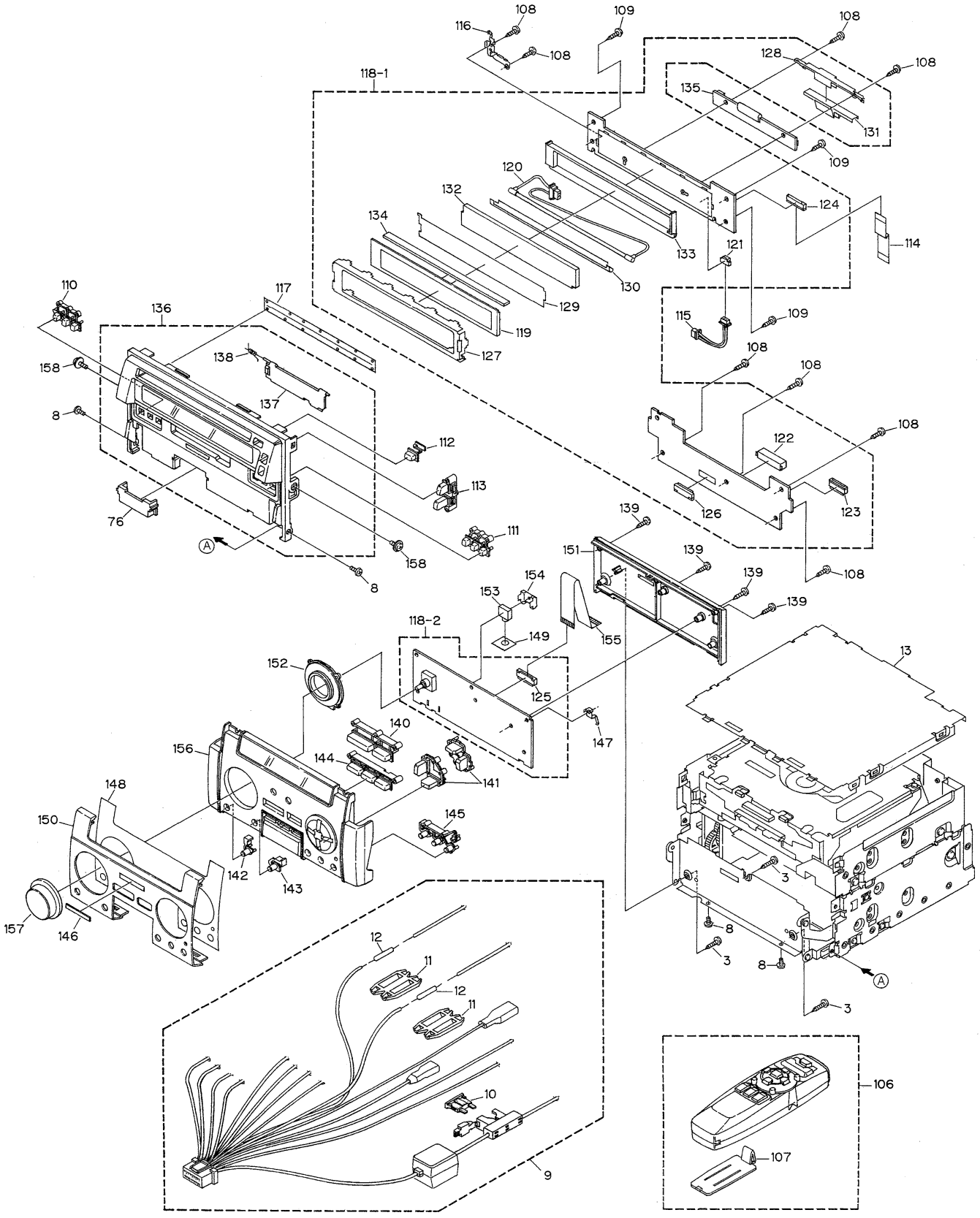
FH-P8800/UC and FH-P8800/ES are constructed same except for the following:

Mark	No.	Symbol and Description	Part No.	
			FH-P8800/UC	FH-P8800/ES
	6-1	Owner's Manual	CRD3127	CRD3129
	6-2	Installation Manual	CRD3128	CRD3130
*	6-3	Card	ARY1048	Not used
	6-5	Panel	CAH1543	Not used
	8	Carton	CHG4022	CHG4023
	9	Contain Box	CHL3992	CHL3993
	19	Cover	CEG1177	CEG1074

● **Owner's Manual,Installation Manual**

Model	Part No.	Language
FH-P8800/UC	CRD3127	English,French
	CRD3128	English,French
FH-P8800/ES	CRD3129	English,Korean
	CRD3130	English,Korean

2.2 EXTERIOR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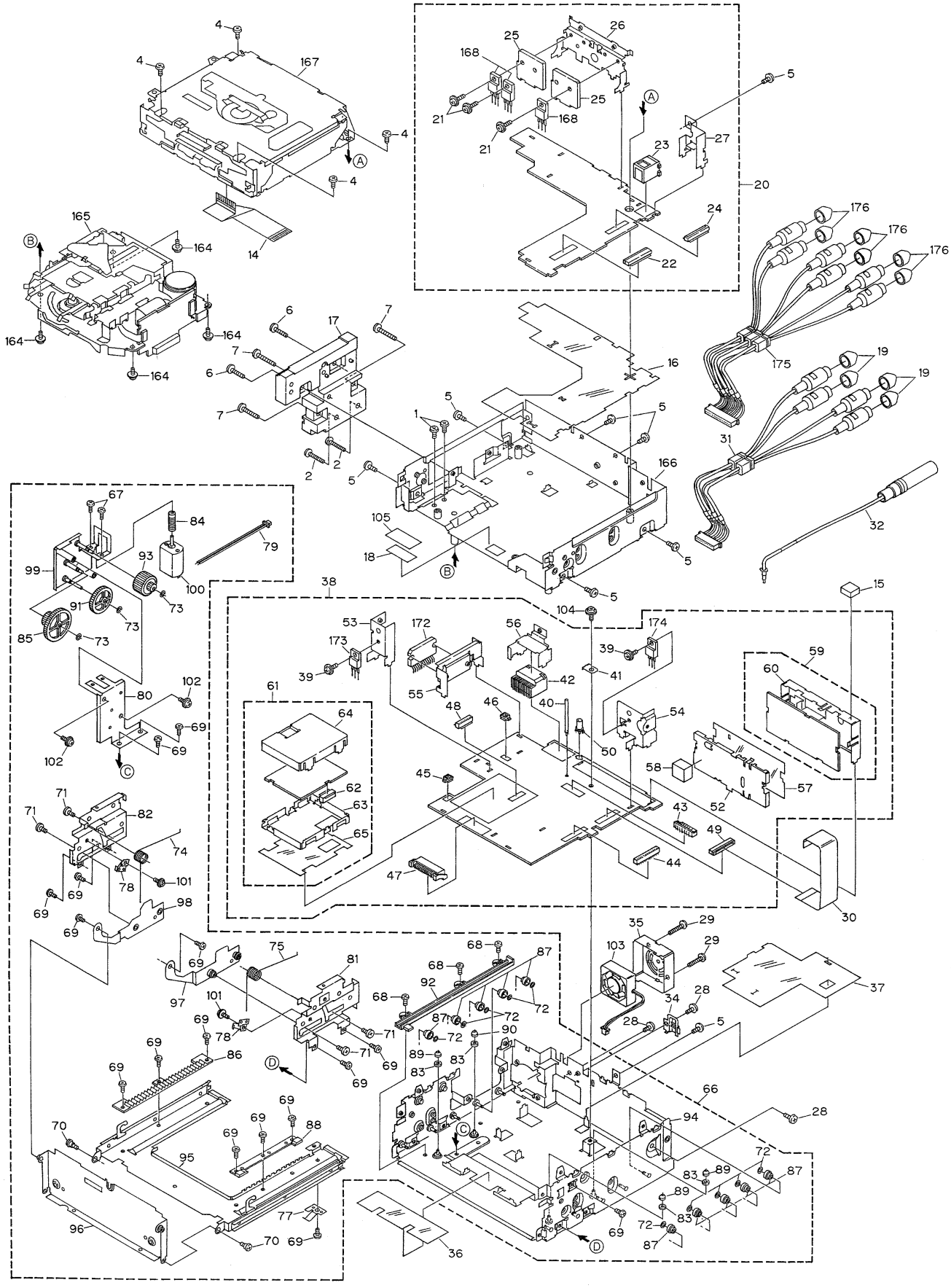


(1) EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BMZ20P025FMC
2	Screw	BMZ26P160FMC
3	Screw	BPZ20P140FZK
4	Screw	BSZ26P060FMC
5	Screw	BSZ30P050FMC
6	Screw	BSZ30P100FMC
7	Screw	BSZ30P140FMC
8	Screw(M2x2.5)	CBA1085
9	Cord Assy	CDE6179
10	Fuse(10A)	CEK1136
11	Cap	CNS1472
12	Resistor	RS1/2PMF102J
13	Case	CNB2452
14	Cable	CDE6116
15	Cushion	CNM6564
16	Insulator	CNM6173
17	Heat Sink	CNR1538
18	Tape	CNM6569
19	Cap	See Contrast table(2)
20	CD Power Unit	See Contrast table(2)
21	Screw	ASZ26P100FMC
22	Connector(CN1241)	CKS2420
23	Connector(CN1271)	CKS3410
24	Connector(CN1251)	CKS3770
25	Heat Sink	CNC7579
26	Holder	CNC8235
27	Holder	CNC8236
28	Screw	BSZ30P050FMC
29	Screw	CBA1384
30	Cable	CDE5897
31	Cord	See Contrast table(2)
32	Antenna Cord	CDH1191
33	•••••	
34	Holder	CNC4709
35	Holder	CNC7577
36	Insulator	CNM6172
37	Insulator	CNM6295
38	Audio Amp Unit	See Contrast table(2)
39	Screw	ASZ26P060FMC
40	Clamper	CEF1009
41	Terminal(CN403)	CKF1059
42	Plug(CN1901)	CKM1278
43	Plug(CN351)	See Contrast table(2)
44	Connector(CN201)	CKS2752
45	Connector(CN851)	CKS3124
46	Connector(CN852)	CKS3124
47	Plug(CN801)	CKS3539
48	Connector(CN751)	CKS3781
49	Connector(CN701)	CKS3802
50	Pin Jack(CN401)	CKX1046
51	•••••	
52	Holder	CNC7533
53	Holder	CNC8230
54	Holder	CNC8231
55	Holder	CNC8232
56	Holder	CNC8233
57	Insulator	CNM5967
58	Spacer	CNM6406
59	FM/AM Tuner Unit	CWE1501
60	Holder	CNC7532
61	DSP Unit	See Contrast table(2)
62	Connector(CN3001)	CKS3782
63	Case	CNC8015
64	Case	CNC8237
65	Insulator	CNM5626
66	Drive Mechanism Assy	See Contrast table(2)
67	Screw	BMZ20P025FMC
68	Screw(M2x2.5)	CBA1085
69	Screw(M2x3)	CBA1154
70	Screw(M2x1.5)	CBA1430
71	Screw	CBA1465
72	Washer	CBF1038
73	Washer	CBF1039
74	Spring	CBH2321
75	Spring	CBH2322
76	Cover	CNS5510
77	Spring	CBL1361
78	Spring	CBL1434
79	Cord	CDE5929
80	Holder	CNC7608
81	Holder	CNC8593
82	Holder	CNC8594
83	Spacer	CNM6202
84	Gear	CNV5296
85	Gear	CNV5297
86	Rack	CNV5299
87	Roller	CNV5301
88	Lever	CNV6042
89	Roller	CNV5735
90	Roller	CNV5814

Mark	No.	Description	Part No.
	91	Gear	CNV5815
	92	Guide	CNV6008
	93	Gear	CNV5655
	94	Chassis Unit	See Contrast table(2)
	95	Frame Unit	CXB4820
	96	Case Unit	CXB4817
	97	Arm Unit	CXB4818
	98	Arm Unit	CXB4819
	99	Holder Unit	CXB4098
*	100	Motor	CXM1111
	101	Screw	IMS20P025FMC
	102	Screw	IMS20P040FMC
	103	Fan Motor	CXM1132
	104	Screw	ISS26P055FUC
	105	Ferrite	CTX1076
	106	Remote Control Assy	CXB3877
	107	Battery Cover	CNS5032
	108	Screw	BPZ20P060FMC
	109	Screw	BPZ20P080FZK
	110	Button(1,2,3)	CAC6282
	111	Button(4,5,6)	CAC6283
	112	Button(CD EJECT)	CAC6284
	113	Button(ANGLE)	CAC6285
	114	Cable	CDE6331
	115	Connector	CDE5927
	116	Conductor	CNC8518
*	117	Cover	CNM6786
	118	Grille PCB Unit	See Contrast table(2)
	119	LCD(LCD901)	CAW1552
	120	CFL	CEL1618
	121	Connector(CN905)	CKS2191
	122	Socket(CN901)	CKS3552
	123	Connector(CN902)	CKS3774
	124	Connector(CN904)	CKS3774
	125	Connector(CN906)	CKS4126
	126	Connector(CN903)	CKS4127
	127	Holder	CNC8519
	128	Shield	CNC8526
	129	Sheet	CNM6475
	130	Reflector	CNM6477
	131	Insulator	CNM6488
	132	Lighting Conductor	CNV5959
	133	Housing	CNV5960
	134	Connector	CNV5961
	135	Inverter Unit	CWX2430
	136	Grille Unit	See Contrast table(2)
	137	Door	CAT2088
	138	Spring	CBH1371
	139	Screw	BPZ20P120FMC
	140	Button(SOURCE,TAPE)	CAC6287

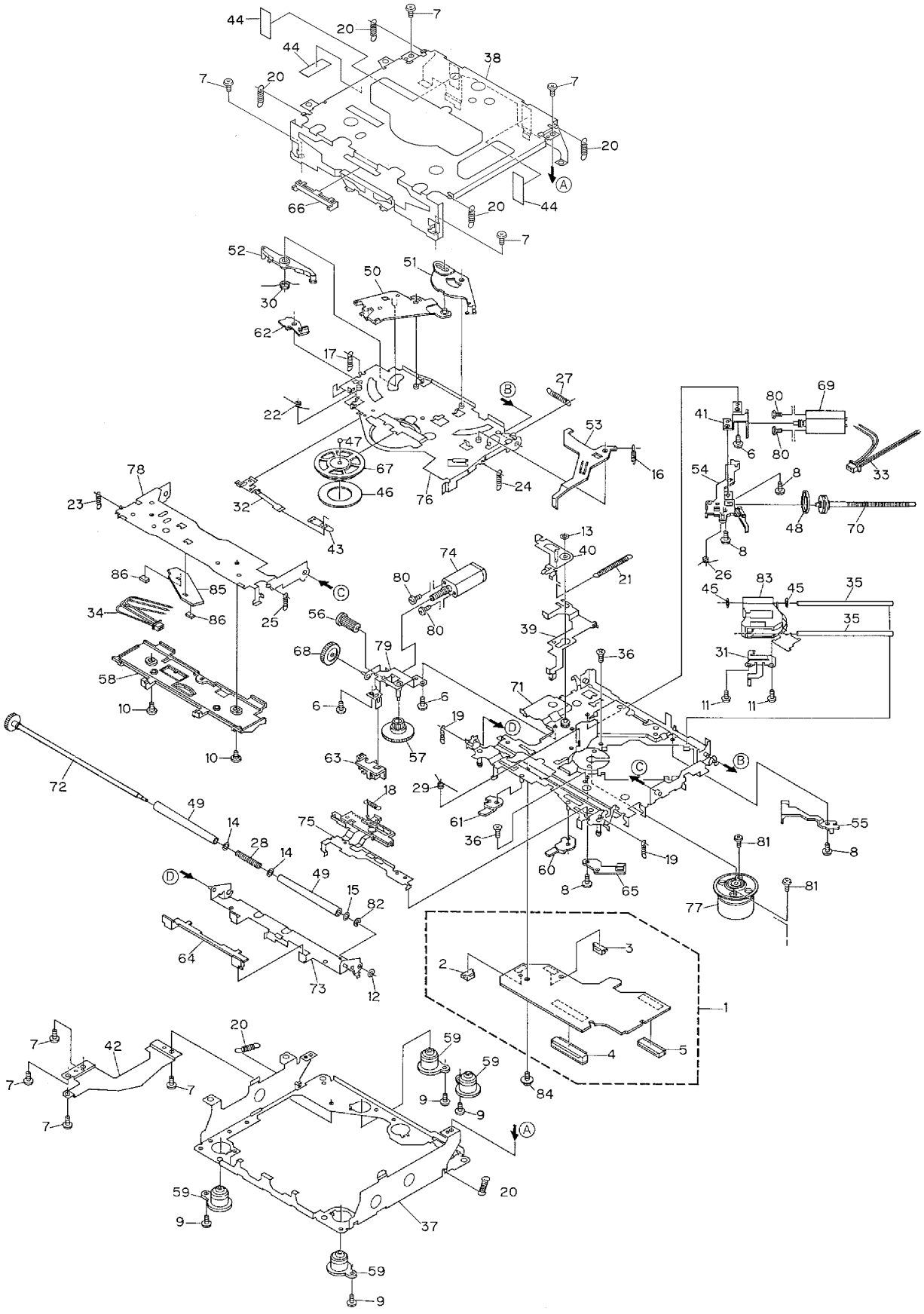
Mark	No.	Description	Part No.
	141	Button(CROSS)	CAC6288
	142	Button(ATT)	CAC6289
	143	Button(D)	CAC6291
	144	Button(DISPLAY,SCROLL,BAND)	CAC6292
	145	Button(D,F,A)	CAC6293
*	146	Badge	CAH1703
	147	Conductor	CNC8520
	148	Tape	CNM6478
	149	Sheet	CNM6568
	150	Panel	CNR1553
	151	Cover	CNS5675
	152	Lighting Conductor	CNV6000
	153	Jack(CN907)	CKN1016
	154	Holder	CNC7575
	155	PCB	CNP5589
	156	Grille Unit	CXB4545
	157	Knob Unit	CXB4549
	158	Screw	ISS26P060FMC
	159-163	•••••	
	164	Screw	ASZ26P060FMC
	165	Cassette Mechanism Module	EXK3350
	166	Chassis Unit	CXB3723
	167	CD Mechanism Module(S8)	CXK5251
	168	Transistor(Q1201,1211,1221)	2SD2396
	169-171	•••••	
	172	IC(IC351)	PAL005A
	173	Transistor(Q806)	2SD2396
	174	IC(IC1901)	NJM7805FA
	175	Cord	See Contrast table(2)
	176	Cap	See Contrast table(2)

(2) CONTRAST TABLE

FH-P8800/UC and FH-P8800/ES are constructed same except for the following:

Mark No.	Symbol and Description	Part No.	
		FH-P8800/UC	FH-P8800/ES
19	Cap	Not used	CNV2680
20	CD Power Unit	CWM6725	CWM6726
31	Cord	Not used	CDE6103
38	Audio Amp Unit	CWM6733	CWM6734
43	Plug(CN351)	CKS1246	CKS1242
61	DSP Unit	CWM6755	CWM6756
66	Drive Mechanism Unit	CXB4843	CXB4858
94	Chassis Unit	CXB4821	CXB4857
118	Grille PCB Unit	CWM6747	CWM6748
136	Grille Unit	CXB5735	CXB5734
175	Cord	CDE6104	Not used
176	Cap	CNV2680	Not used

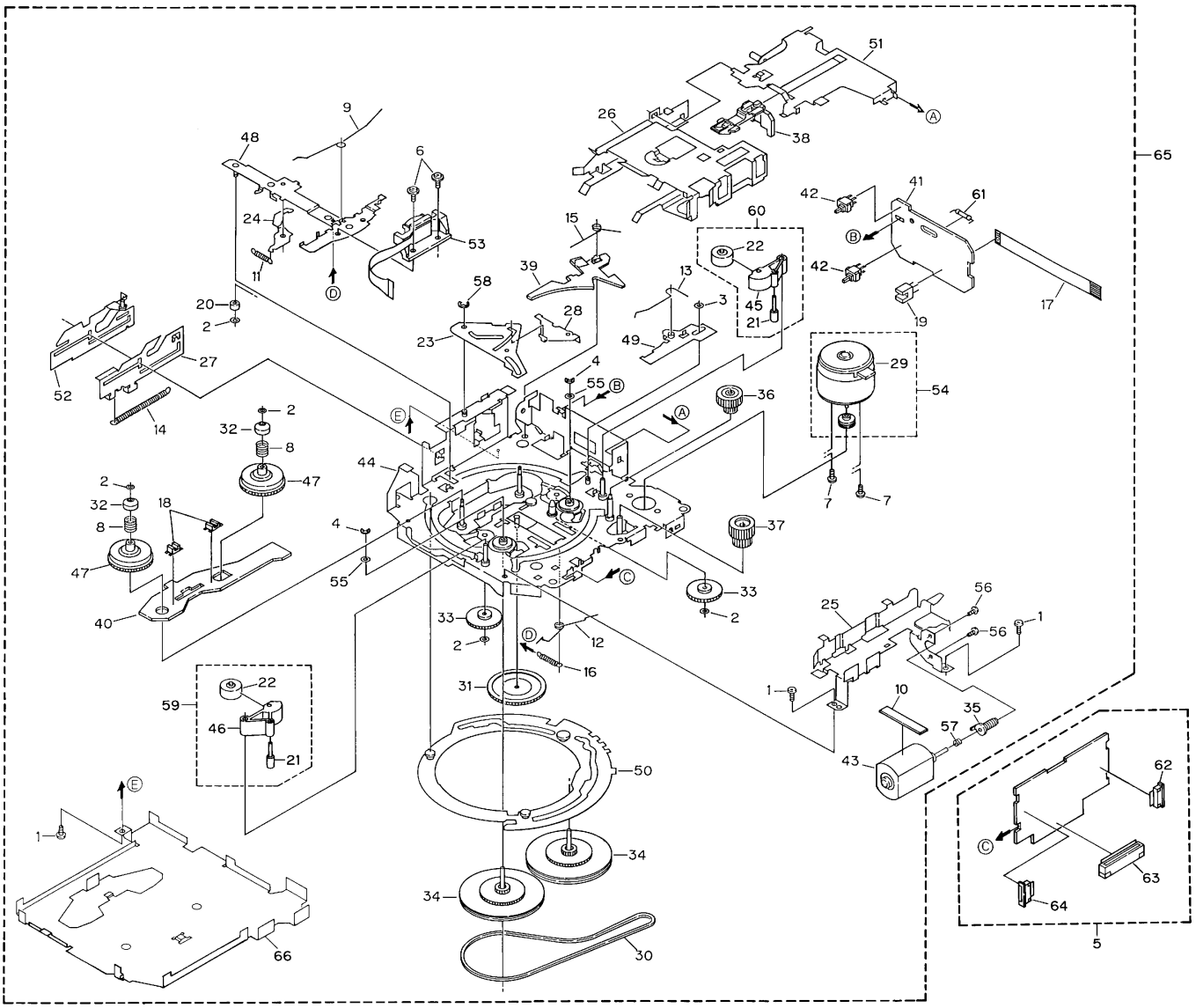
2.3 CD MECHANISM MODULE



● CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Control Unit	CWX2358
	2	Connector(CN802)	CKS2192
	3	Connector(CN801)	CKS2193
	4	Connector(CN701)	CKS2771
	5	Connector(CN101)	CKS3486
	6	Screw	BMZ20P030FZK
	7	Screw	BSZ20P040FZK
	8	Screw(M2×3)	CBA1077
	9	Screw(M2×6)	CBA1489
	10	Screw	CBA1243
	11	Screw(M2×4)	CBA1362
	12	Washer	CBF1037
	13	Washer	CBF1038
	14	Washer	CBF1060
*	15	Washer	CBF1075
	16	Spring	CBH2079
	17	Spring	CBH2117
	18	Spring	CBH2278
	19	Spring	CBH2110
	20	Spring	CBH2282
	21	Spring	CBH2114
	22	Spring	CBH2115
	23	Spring	CBH2080
	24	Spring	CBH2118
	25	Spring	CBH2161
	26	Spring	CBH2163
	27	Spring	CBH2189
	28	Spring	CBH2249
	29	Spring	CBH2260
	30	Spring	CBH2262
	31	Spring	CBL1367
	32	Spring	CBL1369
	33	Connector	CDE5531
	34	Connector	CDE5532
	35	Shaft	CLA3304
	36	Screw(M2.6×6)	CBA1458
	37	Frame	CNC7544
	38	Frame	CNC7545
	39	Lever	CNC7546
	40	Arm	CNC7739
	41	Bracket	CNC7798
	42	Plate	CNC8090
	43	Spacer	CNM3315
	44	Sheet	CNM6170
	45	Cushion	CNM6204
	46	Sheet	CNM6215
	47	Ball	CNR1189
	48	Belt	CNT1086
	49	Roller	CNV4509
	50	Arm	CNV5246
	51	Arm	CNV5247
	52	Arm	CNV5248
	53	Arm	CNV5249
	54	Guide	CNV5254
	55	Guide	CNV5255
	56	Gear	CNV5257
	57	Gear	CNV5256
	58	Guide	CNV6176
	59	Damper	CNV5266
	60	Arm	CNV5359
	61	Arm	CNV5360
	62	Arm	CNV5361
	63	Guide	CNV5509
	64	Guide	CNV5510
	65	Holder	CNV5578
	66	Guide	CNV5751
	67	Clamper	CNV5758
	68	Gear	CNV5813
	69	Motor Unit(M1)	CXB2190
	70	Screw Unit	CXB2191
	71	Chassis Unit	CXB2192
	72	Gear Unit	CXB2193
	73	Arm Unit	CXB2194
	74	Motor Unit(M2)	CXB2195
	75	Lever Unit	CXB2553
	76	Arm Unit	CXB2554
	77	Motor Unit(M3)	CXB2562
	78	Arm Unit	CXB2795
	79	Bracket Unit	CXB4071
	80	Screw	JFZ20P025FMC
	81	Screw	JGZ17P025FZK
	82	Washer	YE15FUC
	83	Pickup Unit(Service)(P8)	CXX1285
	84	Screw	IMS26P030FMC
*	85	PCB	CNX2982
	86	Photo-transistor(Q1, 2)	CPT230SX-TU

2.4 CASSETTE MECHANISM MODULE

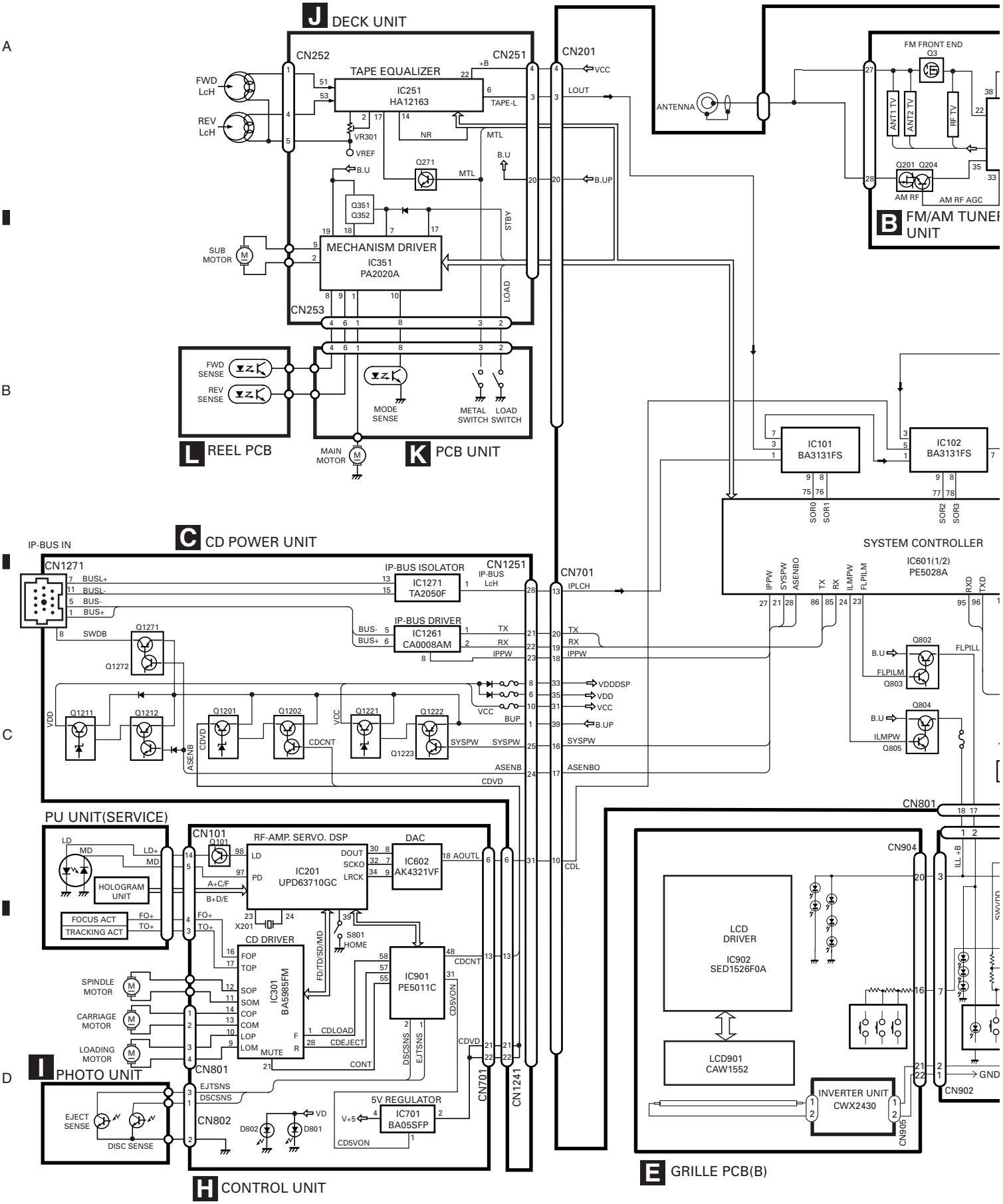


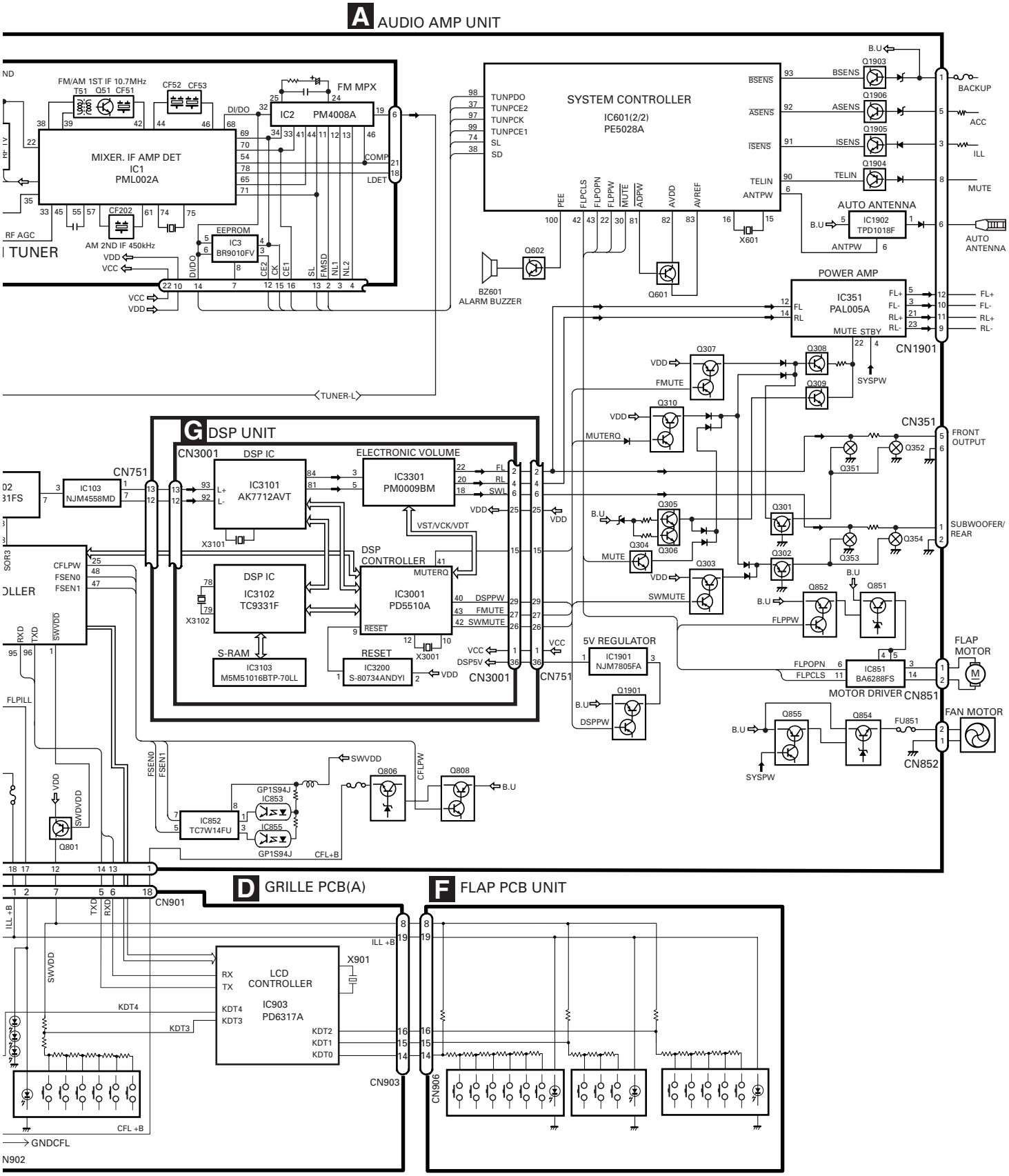
● CASSETTE MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC
2	Washer	CBE1037
3	Washer	CBF1038
4	Washer	CBG1003
5	Deck Unit	EWM1007
6	Screw	EBA1028
7	Screw	EBA1037
8	Spring	EBH1531
9	Spring	EBH1575
10	Cushion	ENM1034
11	Spring	EBH1515
12	Spring	EBH1587
13	Spring	EBH1517
14	Spring	EBH1518
15	Spring	EBH1519
16	Spring	EBH1537
17	Cord	EDD1015
18	Photo-interrupter(EGN2,3)	EGN1006
19	Photo-interrupter(EGN1)	EGN1005
20	Roller	ENR1031
21	Shaft	ELA1373
22	Pinch Roller	ENV1518
23	Arm	ENC1396
24	Arm	ENC1397
25	Guide	ENC1398
26	Holder	ENC1417
27	Lever	ENC1448
28	Arm	ENC1401
29	Motor	EXM1027
30	Belt	ENT1027
31	Gear	ENV1347
32	Collar	ENV1508
33	Gear	ENV1350
34	Flywheel	ENV1410
35	Worm Gear	ENV1439
36	Worm Wheel	ENV1440
37	Gear	ENR1028
38	Lever	ENV1442
39	Arm	ENV1445
40	Gathering PCB	ENX1037
41	PCB	ENP1152
42	Switch(S1,2)	ESG1004
43	Motor Unit(M2)	EXA1485
44	Chassis Unit	EXA1511
45	Pinch Holder	ENV1485
46	Pinch Holder	ENV1486
47	Reel Unit	EXA1456
48	Head Base Unit	EXA1457
49	Lever Unit	EXA1438
50	Gear Unit	EXA1436
51	Frame Unit	EXA1458
52	Lever Unit	EXA1439
53	Head Assy(HD1)	EXA1452
54	Motor Unit(M1)	EXA1454
55	Washer	HBF-179
56	Screw	BMZ20P022FMC
57	Spring	EBH1545
58	Washer	YE20FUC
59	Pinch Holder Unit	EXA1529
60	Pinch Holder Unit	EXA1528
61	Connector(R1)	RD1/4HM181J
62	Connector(CN253)	CKS2129
63	Connector(CN251)	CKS1711
64	Connector(CN252)	CKS2127
65	Mecha. Unit(Service)	EXA3030
66	Cover	ENC1413

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

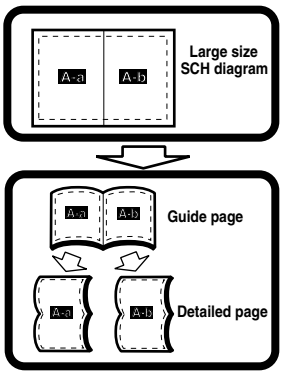


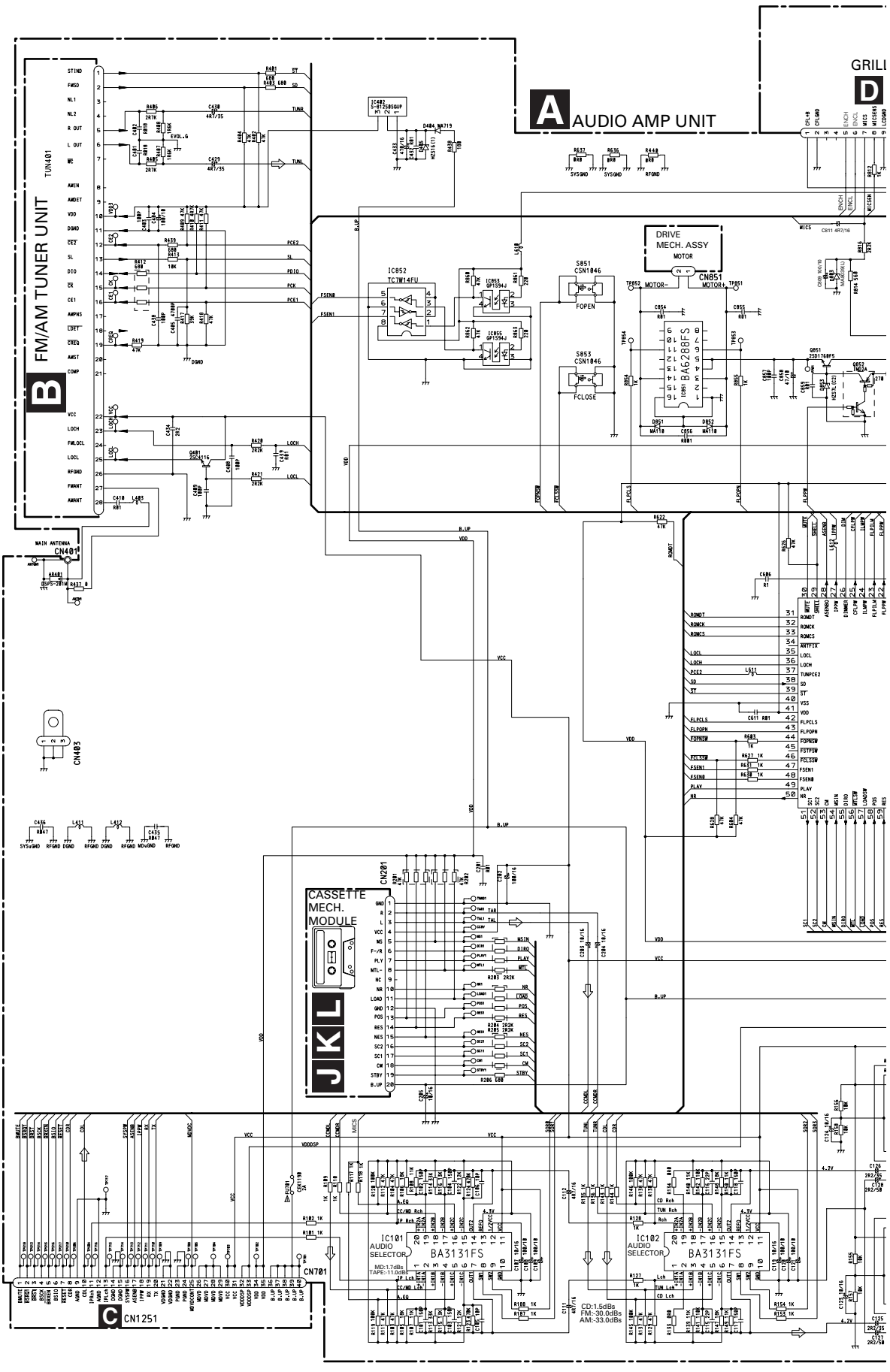

A AUDIO AMP UNIT
SYSTEM CONTROLLER
IC601(2/2)
PE5028A
MIXER. IF AMP DET
IC1
PML002A
IC2 PM4008A
FM MPX
TUNER
AM 2ND IF 450kHz
EEPROM
IC3
BR9010FV
AUTO ANTENNA
IC1902
TPD1018F
POWER AMP
IC351
PAL005A
CN1901
CN351
FRONT OUTPUT
SUBWOOFER/
REAR
FLAP
MOTOR
FAN MOTOR
CN852
CN851
MOTOR DRIVER
BACKUP
ACC
ILL
MUTE
AUTO
ANTENNA
BZ601
ALARM BUZZER
Q602
Q601
X601
TUNER-L
G DSP UNIT
CN3001
DSP IC
IC3101
AK7712AVT
ELECTRONIC VOLUME
IC3301
PM0009BM
DSP
CONTROLLER
IC3001
PD5510A
DSP IC
IC3102
TC9331F
S-RAM
IC3103
M5M51016BTP-70LL
RESET
IC3200
S-80734ANDYI
5V REGULATOR
IC1901
NJM7805FA
CN751
IC103
NJM4558MD
D GRILLE PCB(A)
CN901
LCD
CONTROLLER
IC903
PD6317A
X901
CN903
F FLAP PCB UNIT
CN906
IC852
TC7W14FU
IC853
IC855
GP1S94J
Q806
Q808
Q801
CFL +B
GNDCFL
N902

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

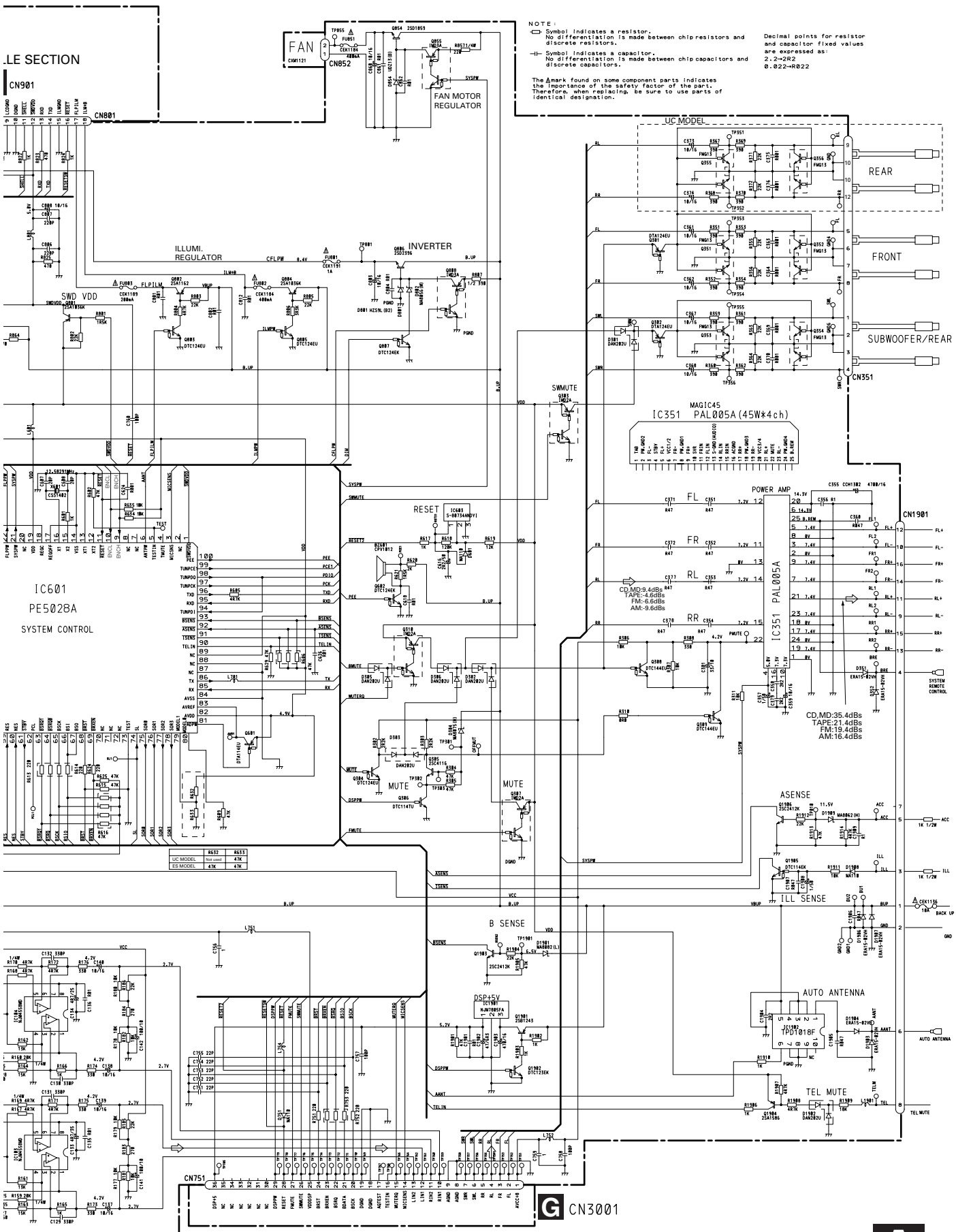
A-a

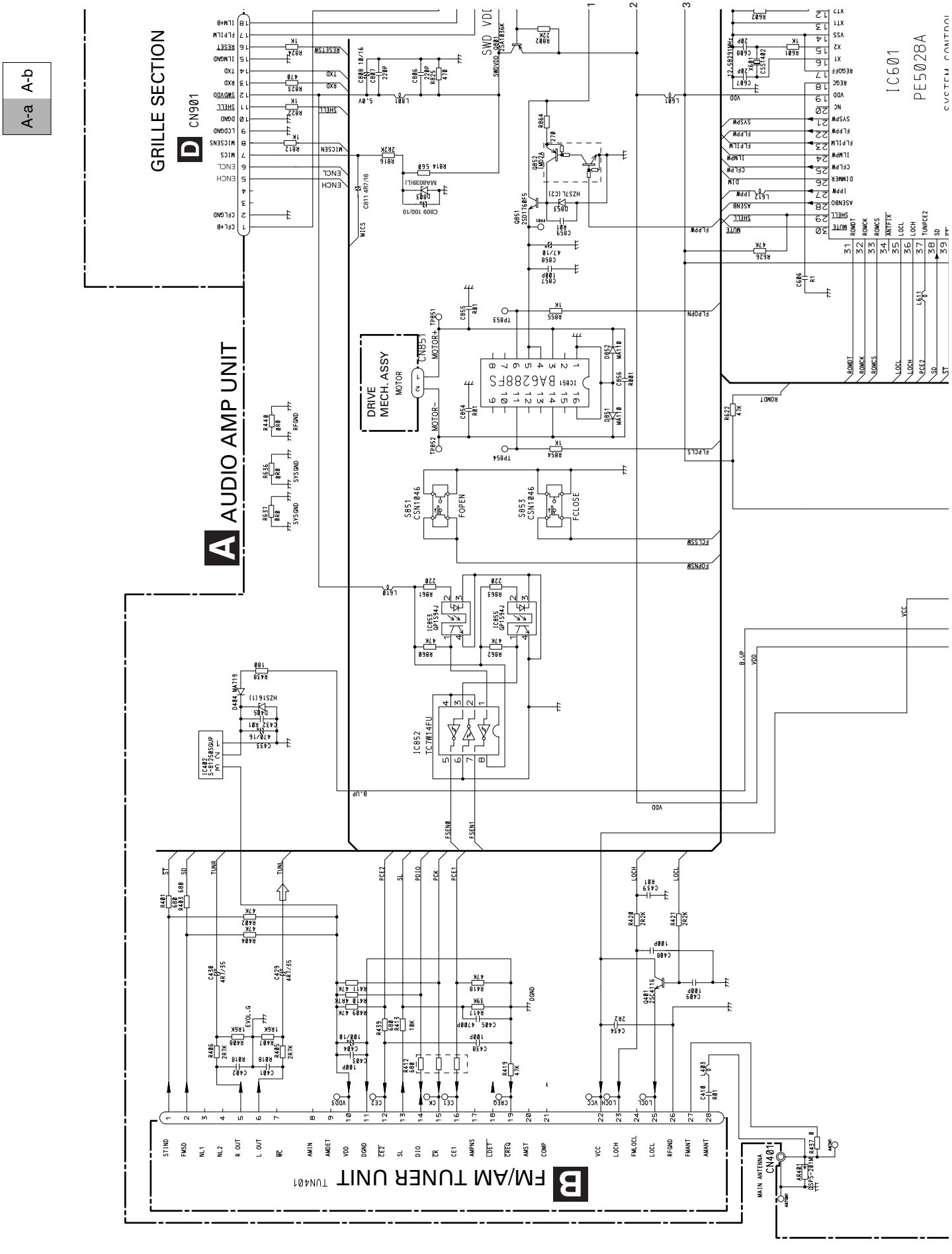
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

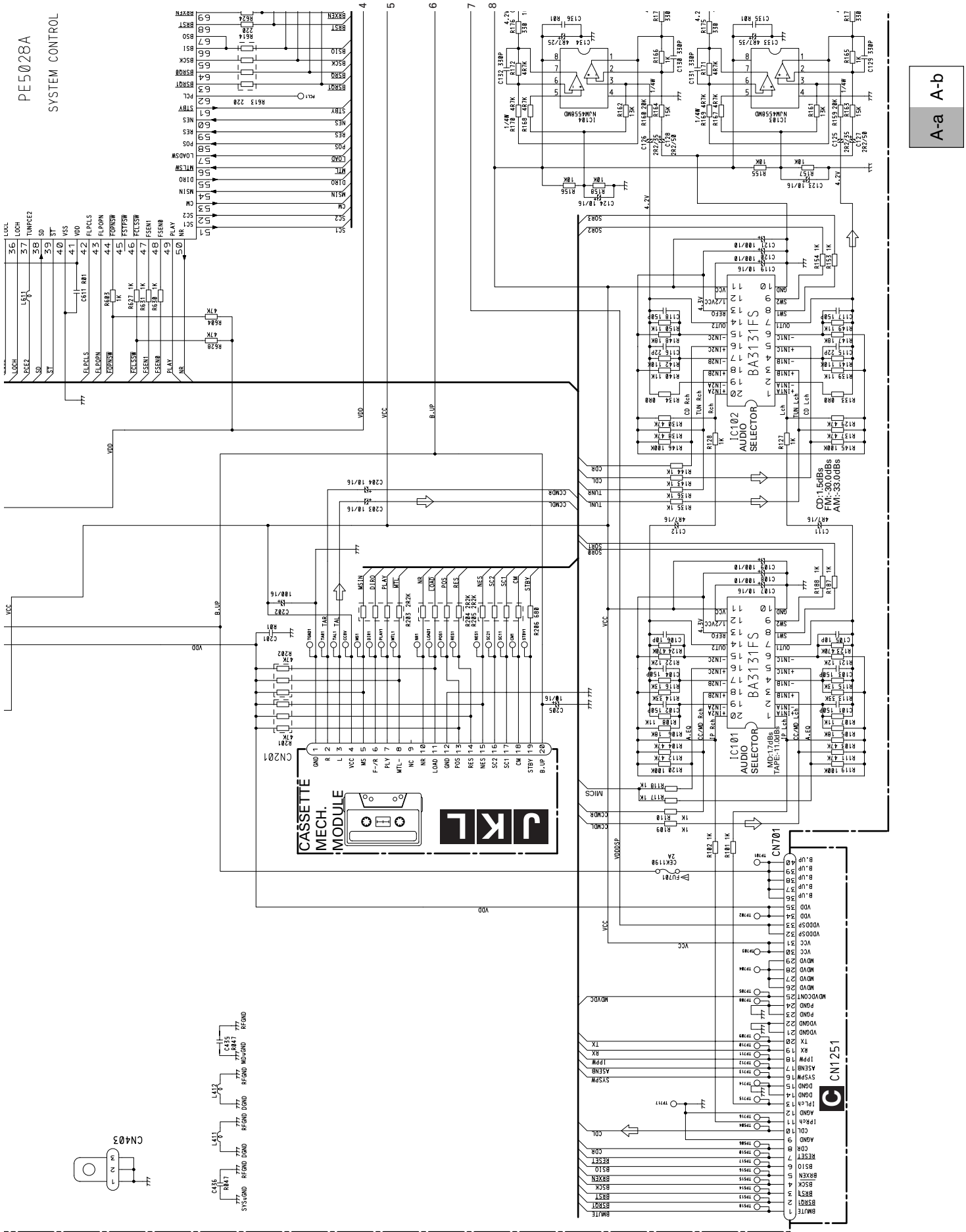


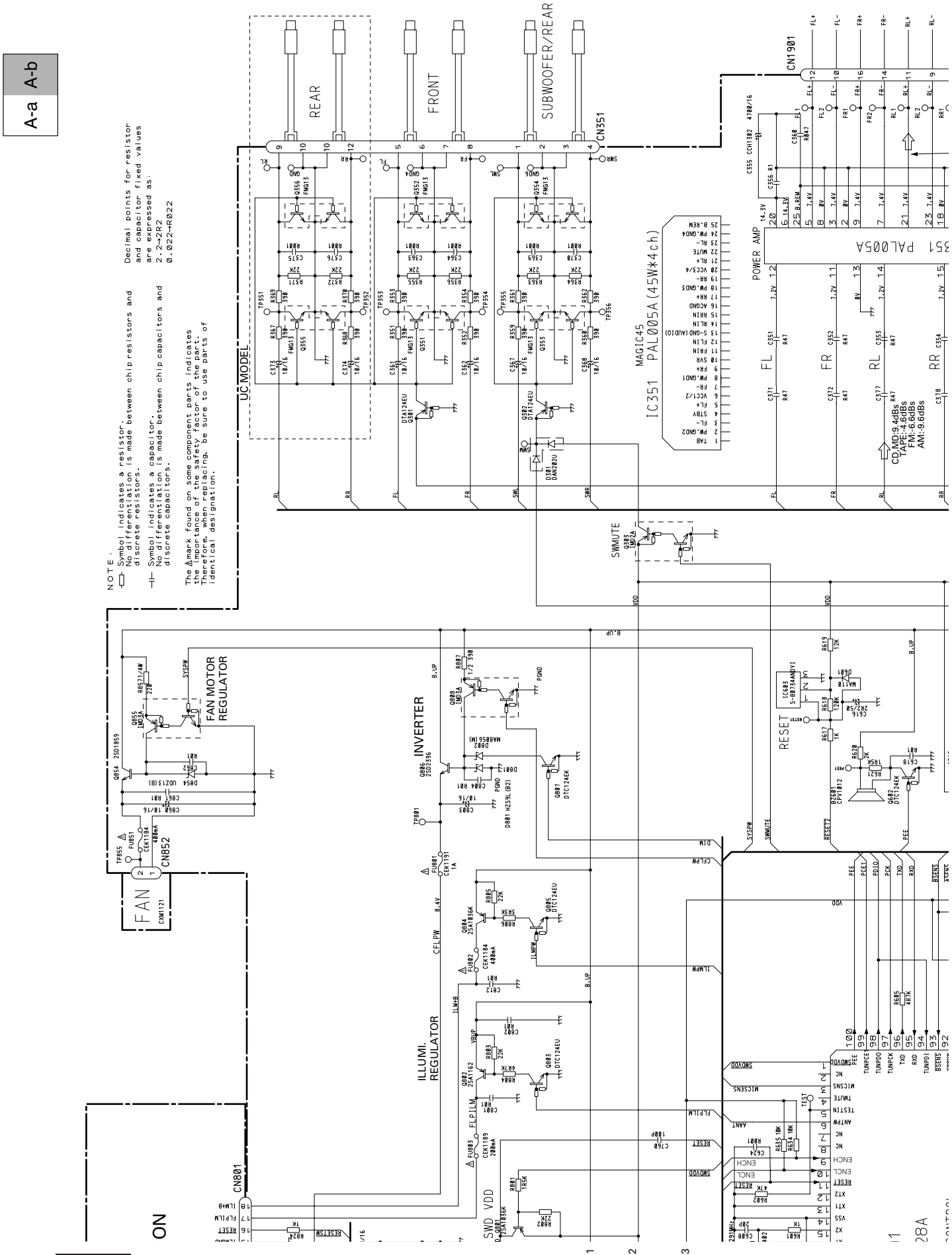


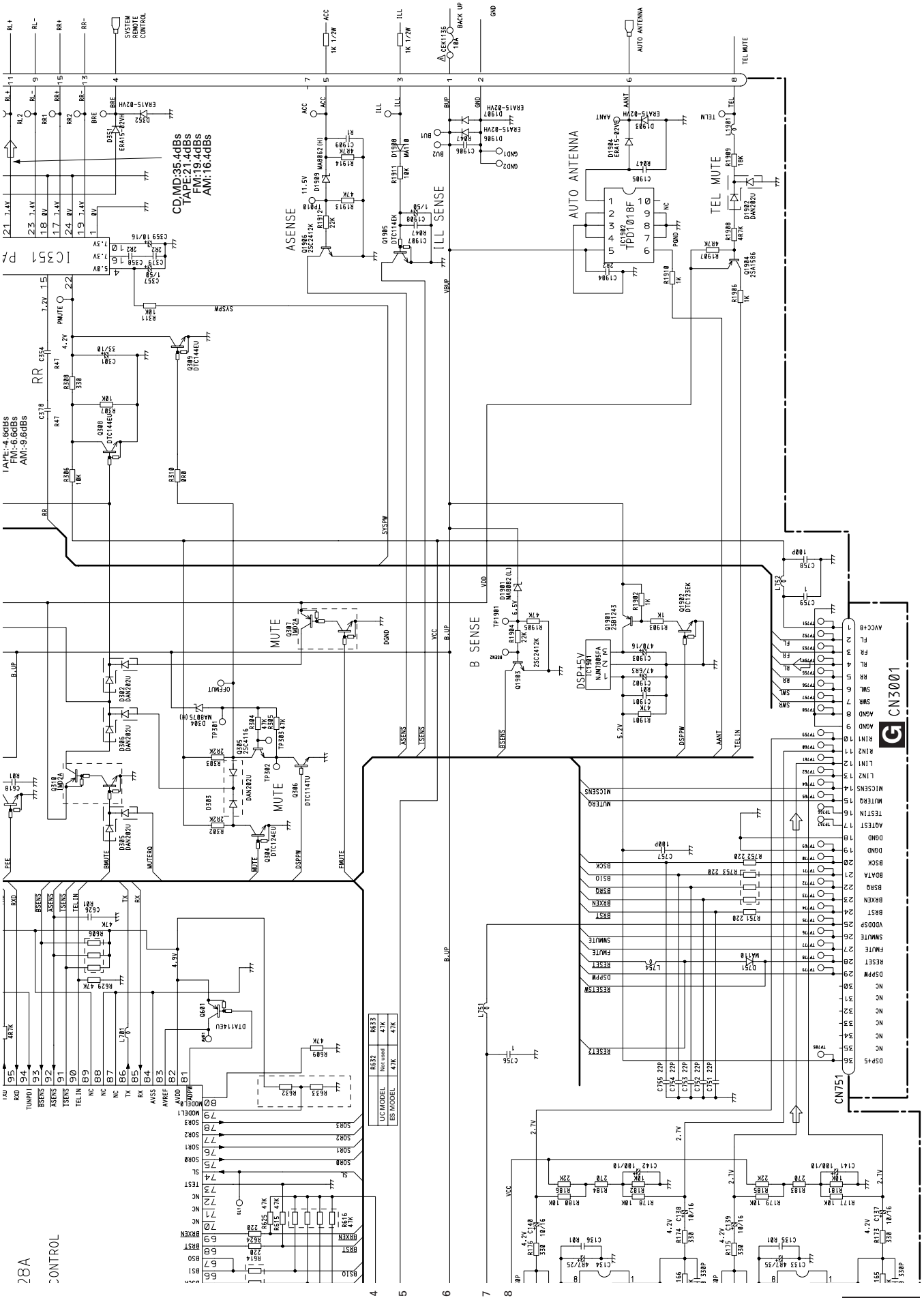
A-b


NOTE:
Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022
.LE SECTION
CN901
CN801
FAN
CN852
FAN MOTOR REGULATOR
ILLUMI. REGULATOR
INVERTER
SWD VDD
UC MODEL
REAR
FRONT
SUBWOOFER/REAR
CN351
SWMUTE
MAGIC45
IC351 PAL005A(45W*4ch)
RESET
IC601
PE5028A
SYSTEM CONTROL
POWER AMP
IC351 PAL005A
CD,MD:9.4dBs
TAPE:-4.6dBs
FM:-6.6dBs
AM:-9.6dBs
CD,MD:35.4dBs
TAPE:21.4dBs
FM:19.4dBs
AM:16.4dBs
CN1901
SYSTEM REMOTE CONTROL
MUTE
ASENSE
ILL SENSE
B SENSE
DSP+5V
AUTO ANTENNA
TEL MUTE
CN751
G CN3001

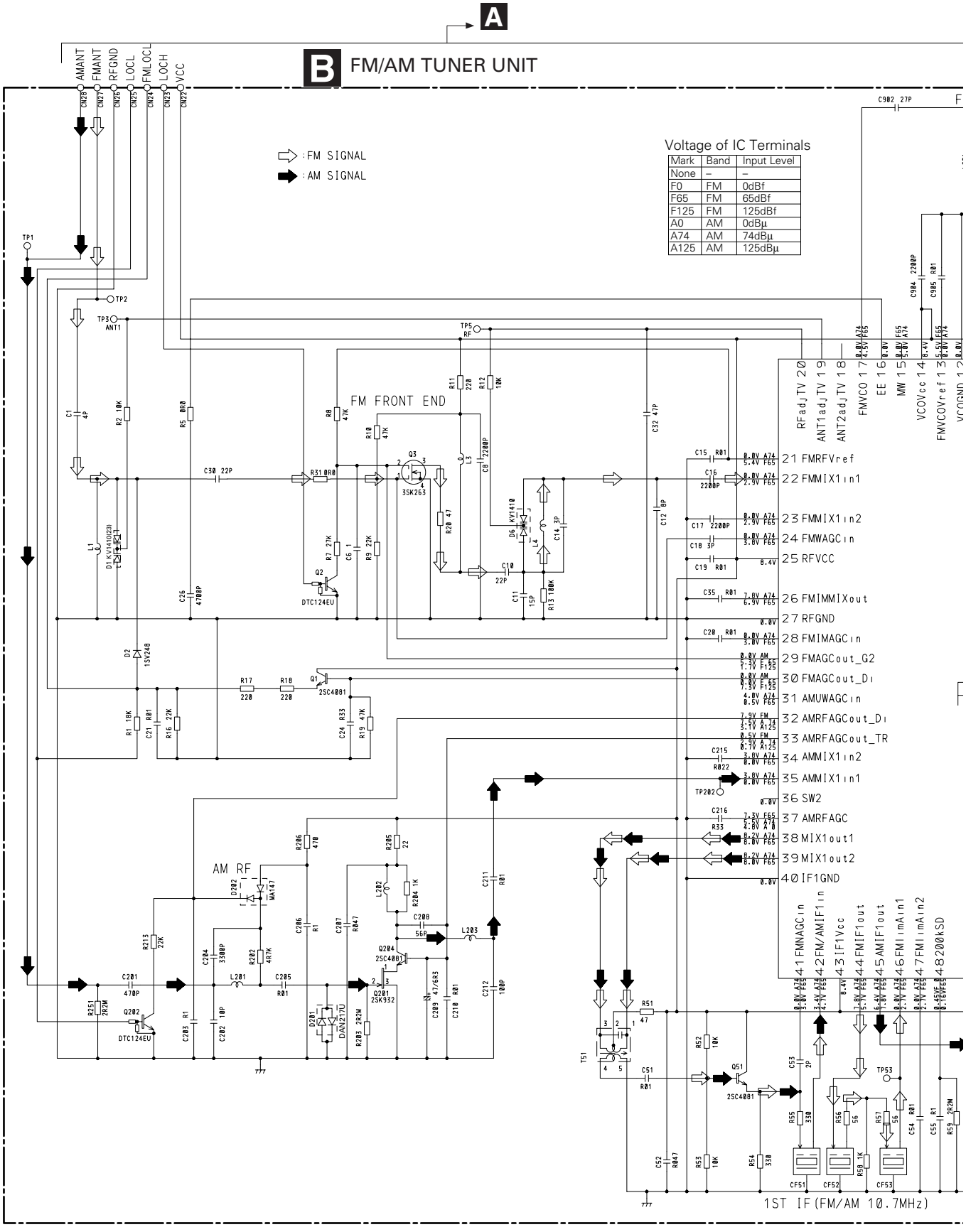

A-b
A-a
GRILLE SECTION
D CN901
A AUDIO AMP UNIT
DRIVE MECH. ASSY MOTOR
CN851
IC6501 PE5028A
IC6051 BA6288FS
S851 CSN1046 FOPEN
S853 CSN1046 FCLOSE
IC6852 TC7W14FU
IC6853 GP1S94J
IC6855 GP1S94J
B FM/AM TUNER UNIT TUN401
CN401 MAIN ANTENNA
STIND FMSD NL1 NL2 R OUT L OUT VC AMIN AMDET VDD DGND CE2 SL DIO CK CE1 AMPNS LDET CREQ AMST COMP VCC LOCH FMLOCL LOCL RFGND FMANT AMANT

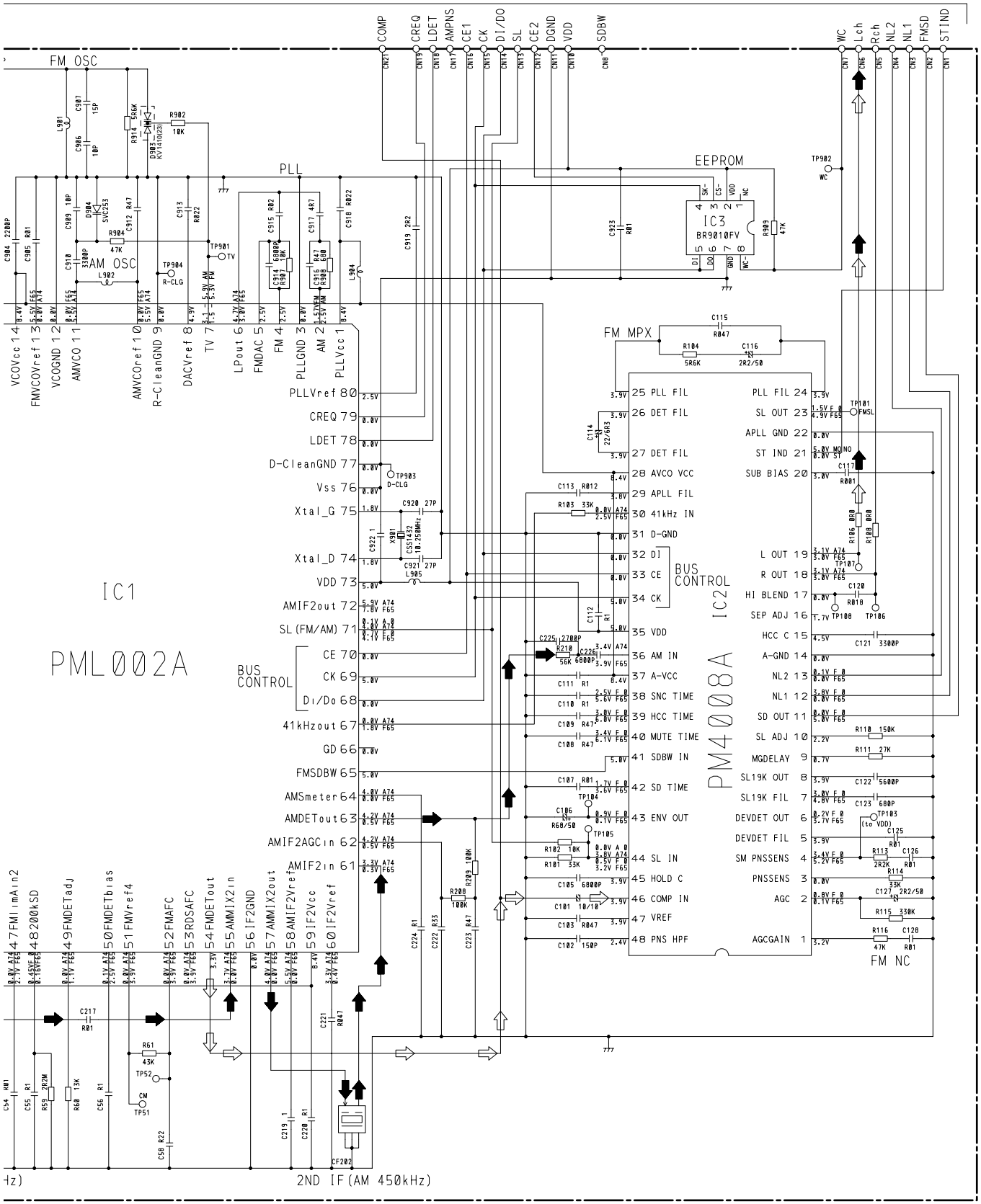

PE5028A
SYSTEM CONTROL
IC101
AUDIO SELECTOR
BA3131FS
IC102
AUDIO SELECTOR
BA3131FS
IC103
NJM4558MD
IC104
NJM4558MD
CASSETTE MECH. MODULE
CN201
CN701
CN1251
CN403
CD:1.5dBs
FM:-30.0dBs
AM:-33.0dBs
MD:17dBs
TAPE:-17.0dBs


A-a A-b
REAR
FRONT
SUBWOOFER/REAR
CN351
CN1901
UC MODEL
POWER AMP
IC351 MAGIC45 PAL005A(45W*4ch)
FL
FR
RL
RR
CD,MD:9.4dBs
TAPE:-4.6dBs
FM:-6.6dBs
AM:-9.6dBs
SWMUTE
RESET
INVERTER
ILLUMI. REGULATOR
FAN MOTOR REGULATOR
FAN
CN852
CN801
ON
SWD VDD
NOTE :
Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022


CD:MD:35.4dBs
TAPE:21.4dBs
FM:19.4dBs
AM:16.4dBs
TAPE:-4.6dBs
FM:-6.6dBs
AM:-9.6dBs
ASENSE
ILL SENSE
AUTO ANTENNA
TEL MUTE
B SENSE
MUTE
DSP+5V
CN3001
CN751
SYSPW
VBUP
B_UP
VCC
DGND
AGND
ASENS
BSENS
TSENS
MUTE0
DSPPW
FMUTE
SWMUTE
RESET
RESET2
BRXEN
BRST
BSCK
BSDA
BSRQ
BSIO
MICSENS
TESTIN
AUTO ANTENNA
TEL MUTE
BACK UP
SYSTEM REMOTE CONTROL
UC MODEL
ES MODEL
Not used

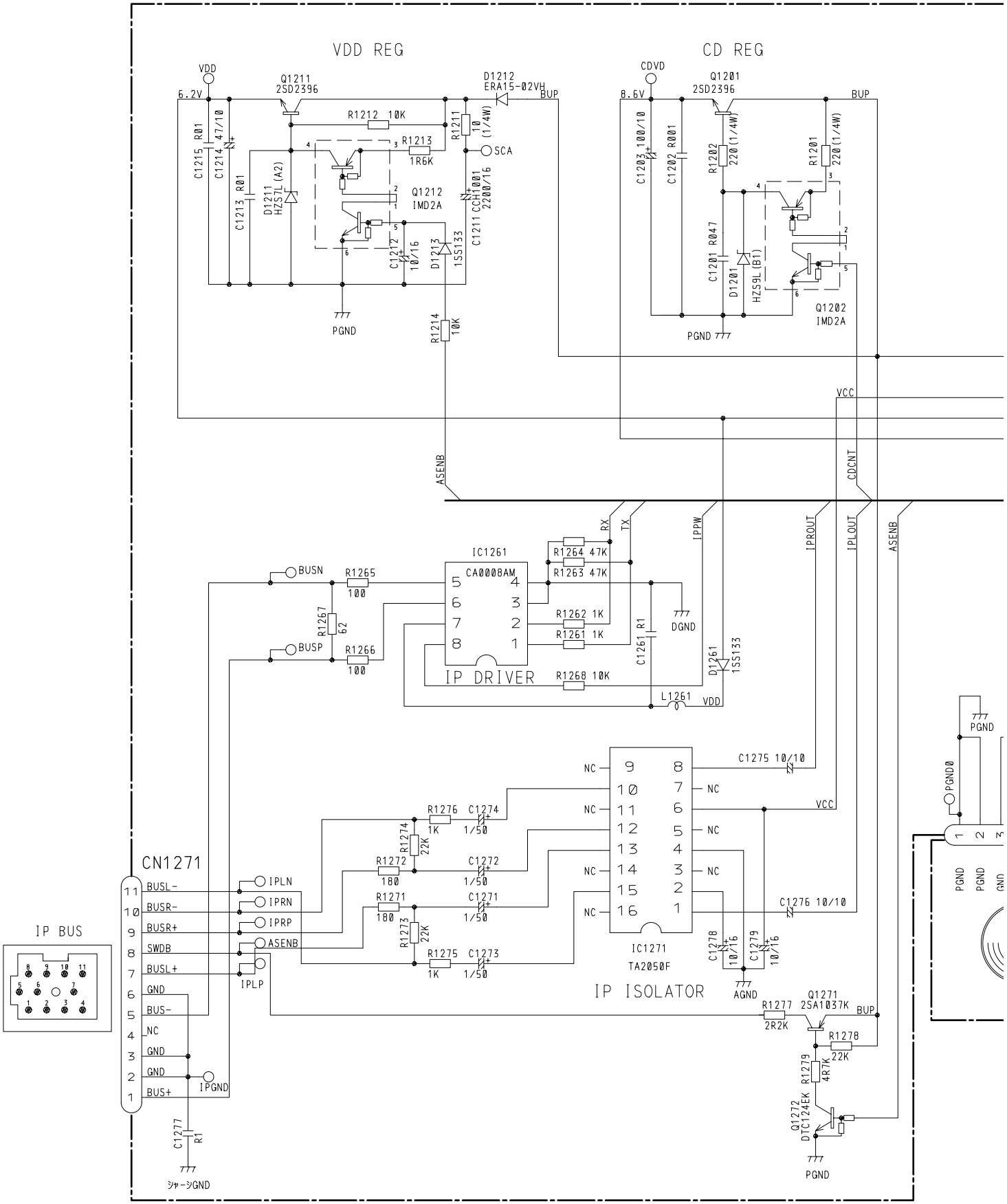
3.2 FM/AM TUNER UNIT

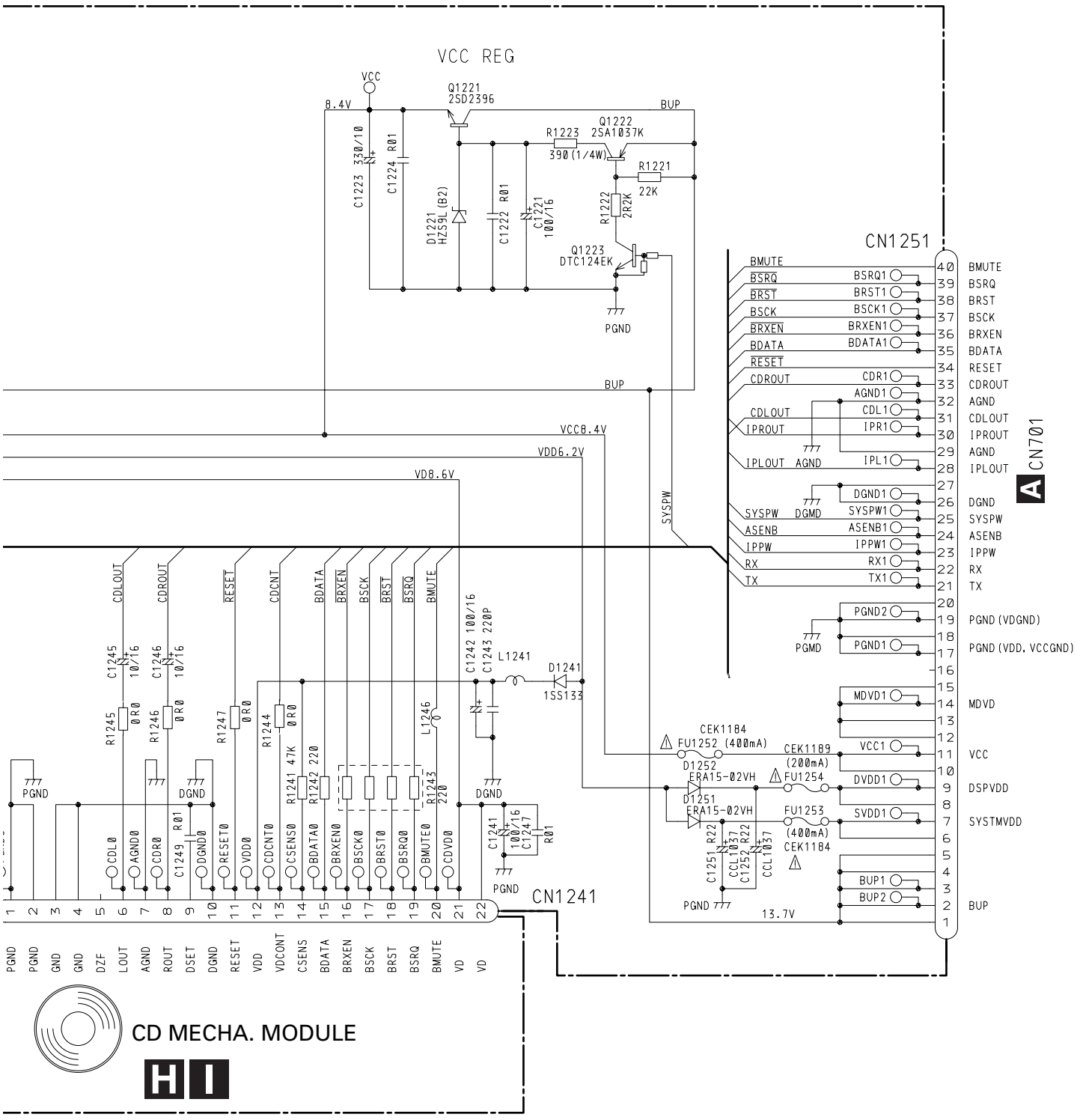



FM OSC
PLL
AM OSC
EEPROM
IC3
BR9010FV
FM MPX
IC1
PML002A
BUS CONTROL
IC2
PM4008A
2ND IF(AM 450kHz)
FM NC

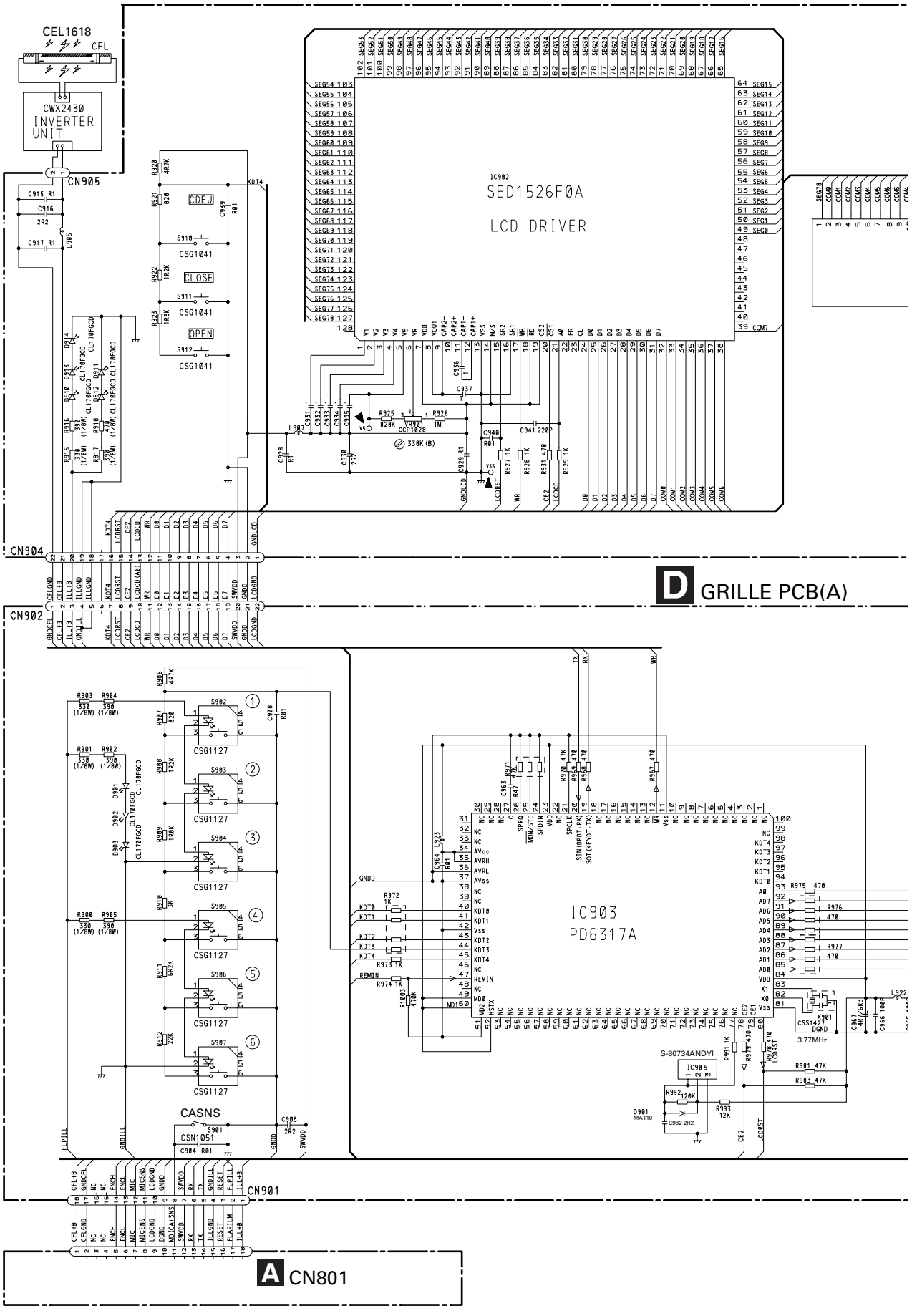
3.3 CD POWER UNIT

C CD POWER UNIT



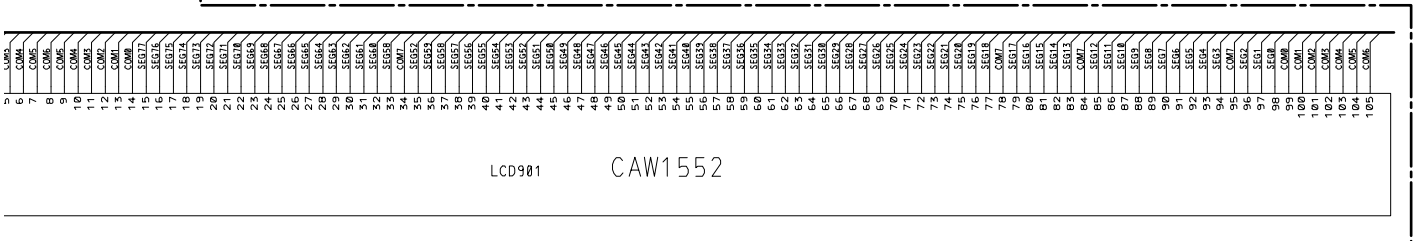

VCC REG
VCC
8.4V
Q1221
2SD2396
BUP
Q1222
2SA1037K
R1223
390(1/4W)
R1221
22K
R1222
2R2K
Q1223
DTC124EK
C1223 330/10
C1224 R01
D1221
HZ5L(B2)
C1222 R01
C1221
100/16
PGND
BUP
VCC8.4V
VDD6.2V
VD8.6V
SYSPW
CN1251
BMUTE
BSRQ
BRST
BSCK
BRXEN
BDATA
RESET
CDROUT
CDLOUT
IPROUT
IPLOUT
AGND
SYSPW
ASENB
IPPW
RX
TX
PGND (VDGND)
PGND (VDD, VCCGND)
MDVD
VCC
DSPVDD
SYSTMVDD
BUP
CN701
CDLOUT
CDROUT
RESET
CDCNT
BDATA
BRXEN
BSCK
BRST
BSRQ
BMUTE
C1245 10/16
C1246 10/16
C1242 100/16
C1243 220P
L1241
D1241
1SS133
R1245 0R0
R1246 0R0
R1247 0R0
R1244 0R0
R1241 47K
R1242 220
L1246
R1243 220
C1241 100/16
C1247 R01
C1249 R01
PGND
DGND
CEK1184
FU1252 (400mA)
D1252
ERA15-02VH
D1251
ERA15-02VH
CEK1189
(200mA)
FU1254
FU1253
(400mA)
CEK1184
C1251 R22
C1252 R22
CCL1037
CCL1037
13.7V
CN1241
CDL0
AGND0
CDR0
DGND0
RESET0
VDD0
CDCNT0
CSENS0
BDATA0
BRXEN0
BSCK0
BRST0
BSRQ0
BMUTE0
CDVD0
PGND
PGND
GND
GND
DZF
LOUT
AGND
ROUT
DSET
DGND
RESET
VDD
VDCONT
CSENS
BDATA
BRXEN
BSCK
BRST
BSRQ
BMUTE
VD
VD
CD MECHA. MODULE
H I

3.4 GRILLE PCB(A),(B),FLAP PCB UNIT

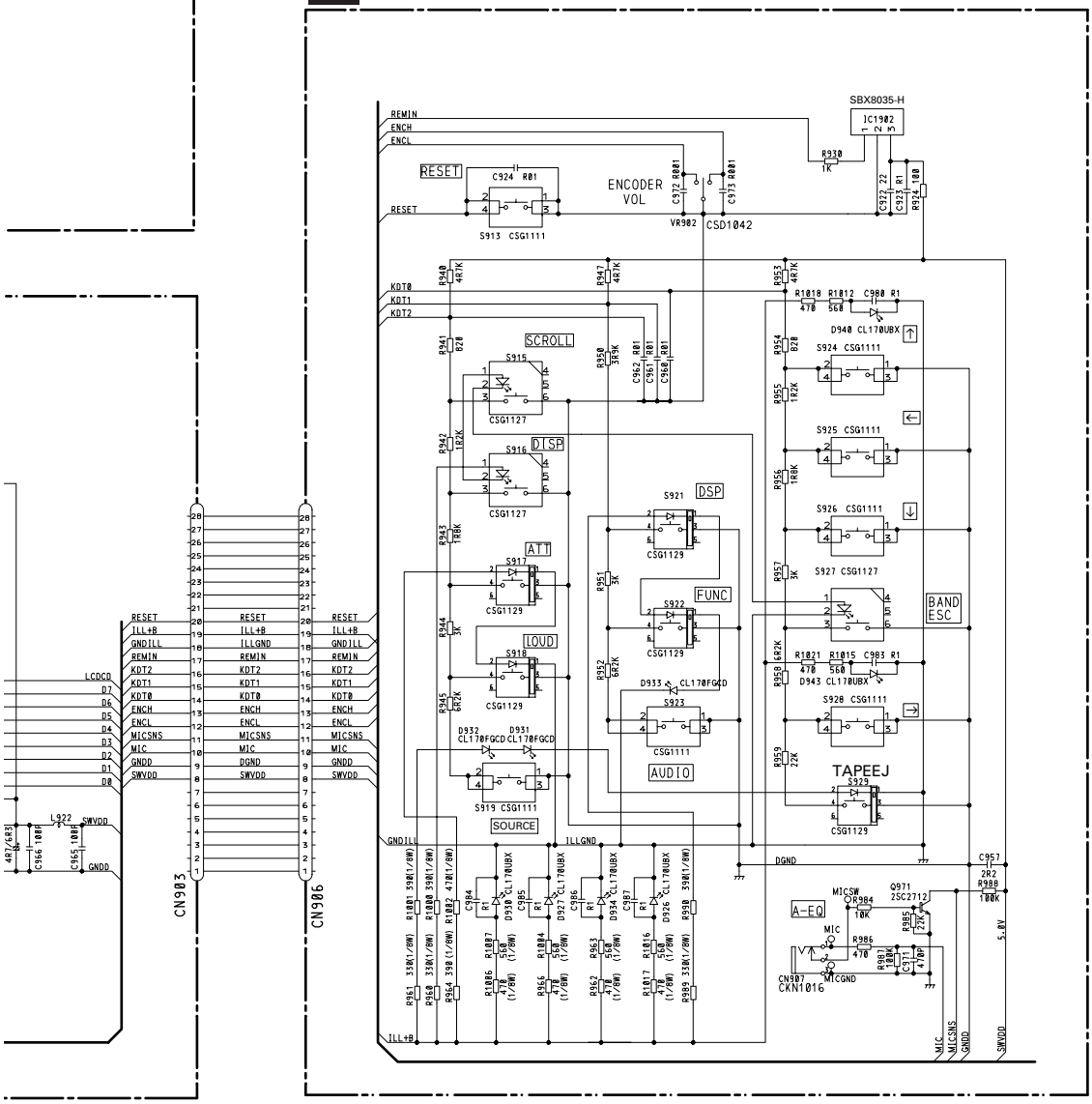


D E F

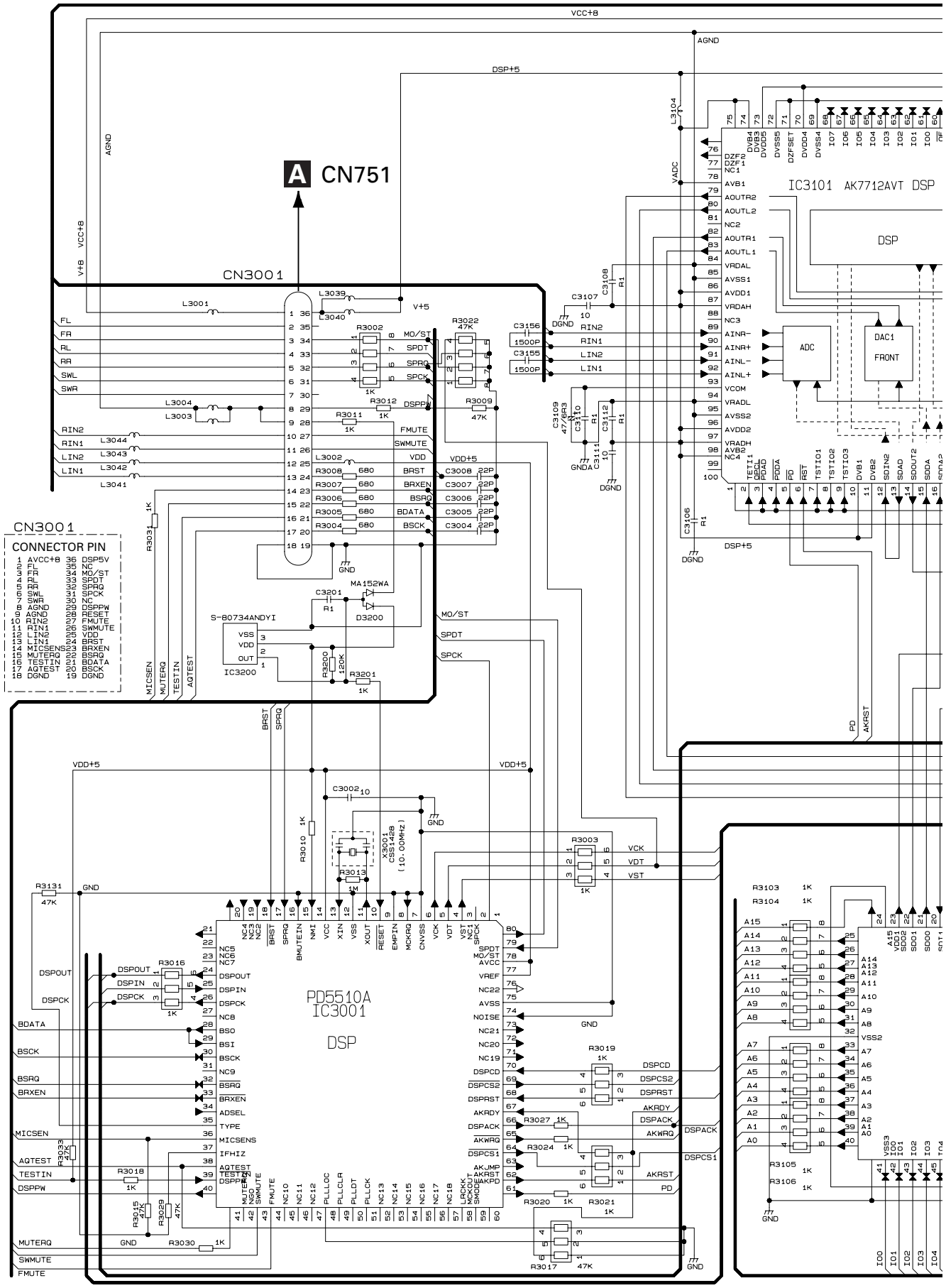
E GRILLE PCB(B)



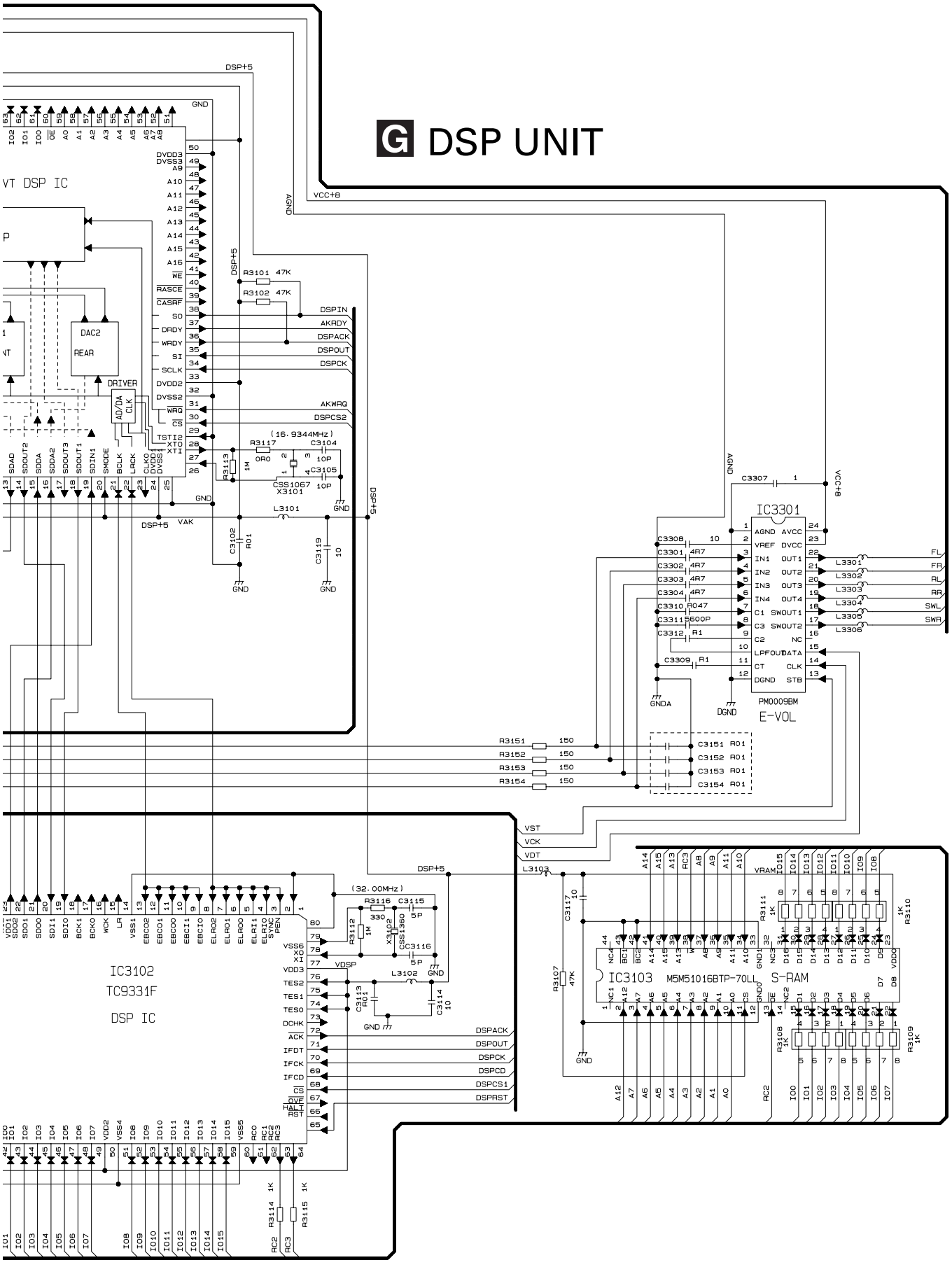
F FLAP PCB UNIT



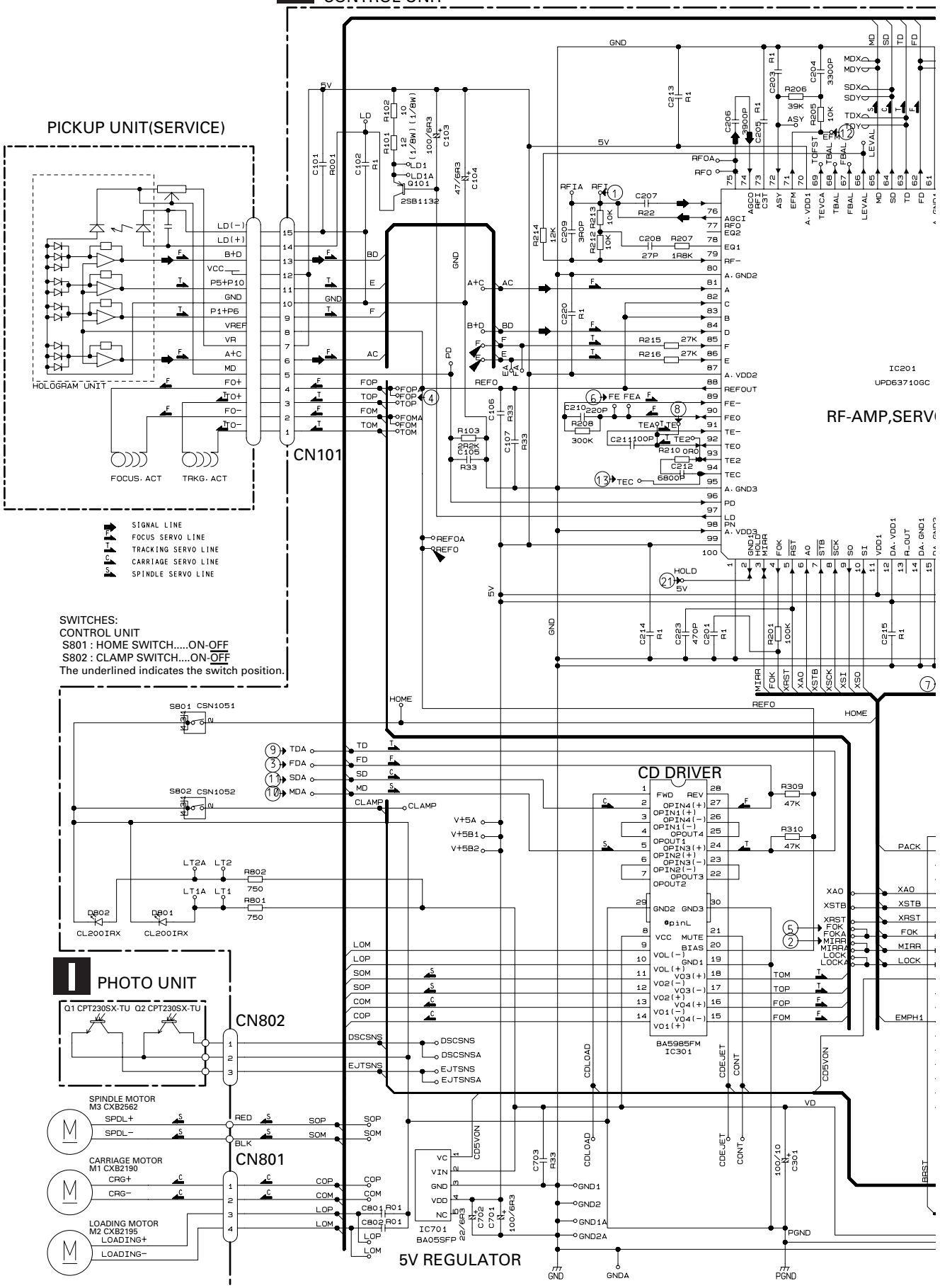
GRILLE PCB UNIT
Consists of
GRILLE PCB(A)
GRILLE PCB(B)
FLAP PCB UNIT

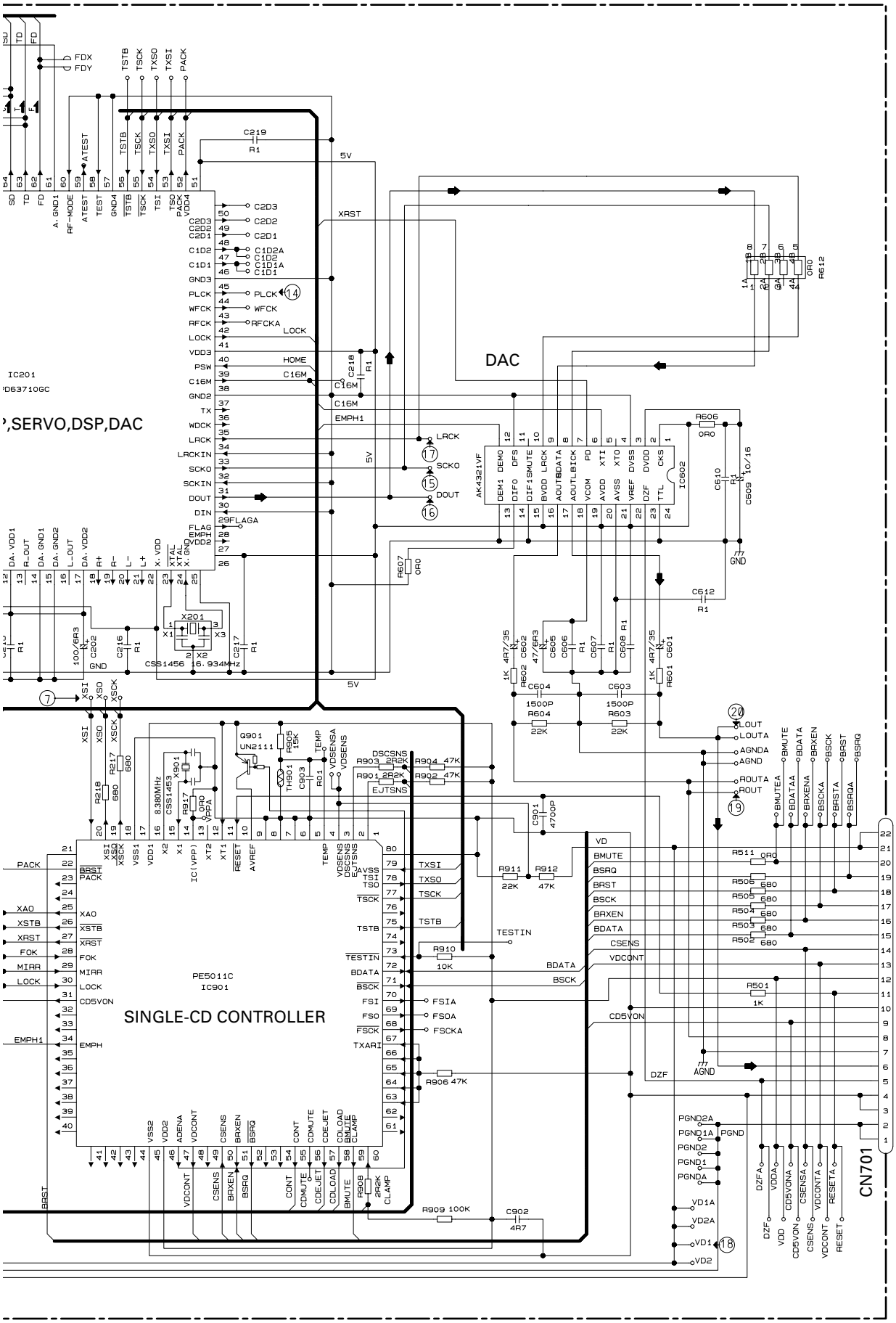

A CN751
CN3001
IC3101 AK7712AVT DSP
DSP
ADC
DAC1
FRONT
PD5510A
IC3001
DSP
S-80734ANDYI
IC3200
X3001
CSS1248
(10.00MHz)
CN3001
CONNECTOR PIN
1 AVCC+B 36 DSP5V
2 FL 35 NC
3 FR 34 MO/ST
4 RL 33 SPDT
5 RR 32 SPRQ
6 SWL 31 SPCK
7 SWR 30 NC
8 AGND 29 DSPPW
9 AGND 28 RESET
10 RIN2 27 FMUTE
11 RIN1 26 SWMUTE
12 LIN2 25 VDD
13 LIN1 24 BRST
14 MICSENS 23 BRXEN
15 MUTERQ 22 BSRQ
16 TESTIN 21 BDATA
17 AQTEST 20 BSCK
18 DGND 19 DGND

G DSP UNIT


IC3102
TC9331F
DSP IC
IC3103
M5M51016BTP-70LL
S-RAM
IC3301
PM0009BM
E-VOL
DAC2
REAR
DRIVER
DSP+5
VCC+8
AGND
GND
DSPIN
AKRDY
DSPACK
DSPOUT
DSPCK
AKWRQ
DSPCS2
DSPCS1
DSPRST
VST
VCK
VDT
L3103
(16.9344MHz)
(32.00MHz)
FL
FR
RL
RR
SWL
SWR

3.6 CD MECHANISM MODULE H CONTROL UNIT

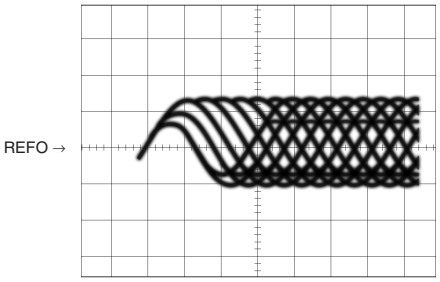



SINGLE-CD CONTROLLER
PE5011C
IC901
DAC
AK4321VF
IC602
IC201
,SERVO,DSP,DAC
CN701
CN1241
X201
8.380MHz
16.934MHz
CSS1456
CSS1453
Q901
UN2111
TH901
FDX
FDY
5V
GND
XRST
LOCK
HOME
C16M
EMPH1
LRCK
SCKO
DOUT
FLAGA
PLCK
WFCK
RFCKA
TSTB
TSCK
TXSO
TXSI
PACK
ATEST
XSI
XSO
XSCK
XST
XRST
FOK
MIRR
LOCK
CD5VON
EMPH
TESTIN
BDATA
BSCK
FSIA
FSOA
FSCKA
TXARI
DSCSNS
EJTSNS
VDSENSA
VDSENS
TEMP
VCONT
CSENS
BRXEN
BSRQ
CONT
CDMUTE
CDEJET
CDLOAD
BMUTE
CLAMP
DZF
VDD
VDDA
CD5VONA
CSENSA
VDCONTA
RESETA
PGND
PGND2A
PGND1A
PGND2
PGND1
PGNDA
VD1A
VD2A
VD1
VD2
BMUTE
BSRQ
BRST
BDATA
BRXEN
BSCK
CSENS
VDCONT
VD
RESET
UGND
ROUT
AGND
LOUT
GND

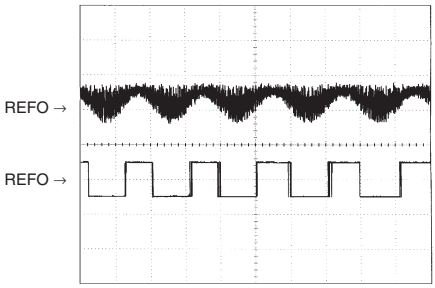
Note:1. The encircled numbers denote measuring pointes in the circuit diagram.
2. Reference voltage
REFO:2.5V

● Waveforms

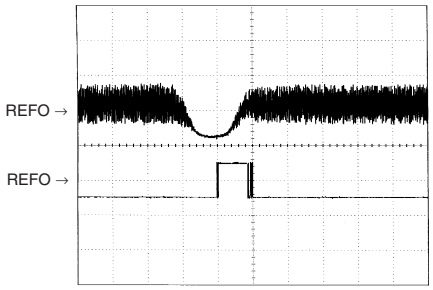
① RFI 0.5V/div. 0.5μs/div.
Normal mode: play



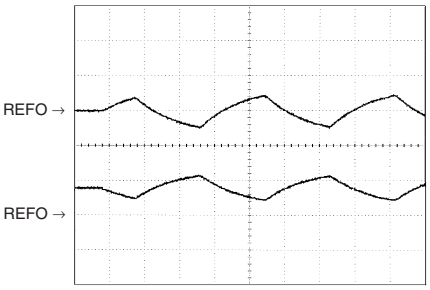
① CH1: RFI 1V/div. 0.5ms/div.
② CH2: MIRR 5V/div.
Test mode: Tracking open



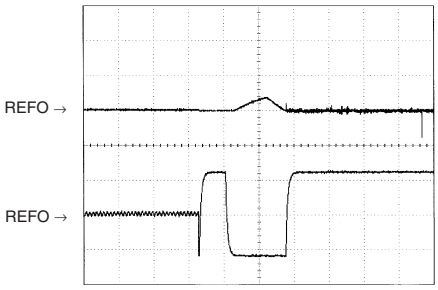
① CH1: RFI 1V/div. 0.5ms/div.
② CH2: MIRR 5V/div.
Normal mode: The defect part passes 800μm



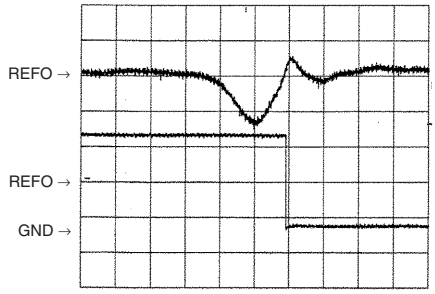
③ CH1: FD 0.5V/div. 0.2s/div.
④ CH2: FO+ 2V/div.
Test mode: No disc, Focus close



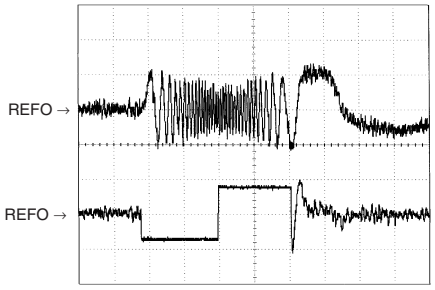
③ CH1: FD 0.5V/div. 0.2s/div.
⑤ CH2: FOK 2V/div.
Normal mode: Focus close



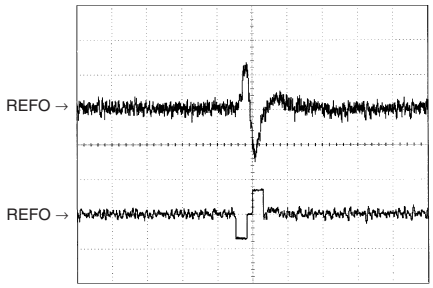
⑥ CH1: FE 0.5V/div. 1ms/div.
⑦ CH2: XSI 2V/div.
Normal mode: Focus close



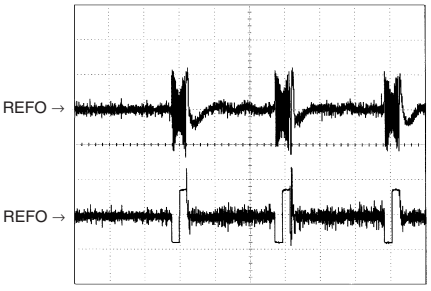
⑧ CH1: TE 0.5V/div. 0.5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: 32 tracks jump (REV)



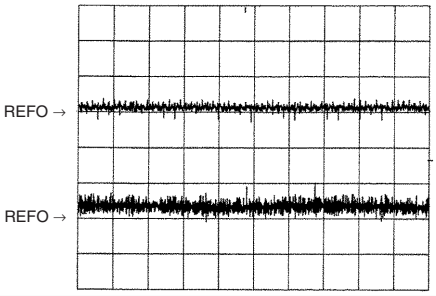
⑧ CH1: TE 0.5V/div. 0.5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: Single jump (REV)



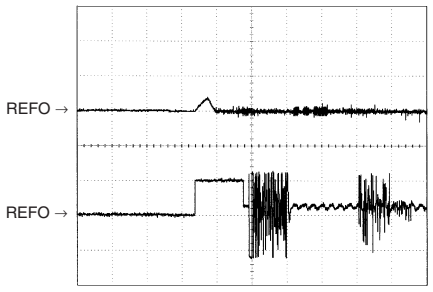
⑧ CH1: TE 0.5V/div. 5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: 100 tracks jump (REV)



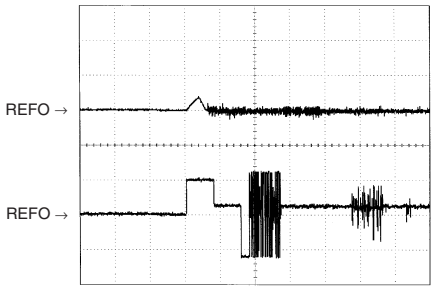
⑥ CH1: FE 0.1V/div. 20ms/div.
③ CH2: FD 0.2V/div.
Normal mode: Play



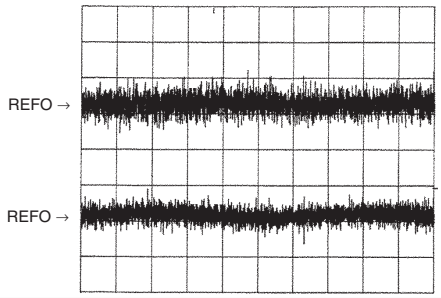
③ CH1: FD 0.5V/div. 0.5s/div.
⑩ CH2: MD 1V/div.
Normal mode: Focus close (12cm)



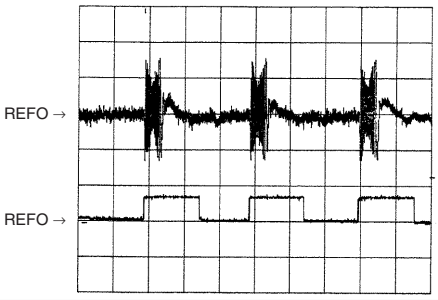
③ CH1: FD 0.5V/div. 0.5s/div.
⑩ CH2: MD 1V/div.
Normal mode: Focus close (8cm)



⑧ CH1: TE 0.2V/div. 20ms/div.
⑨ CH2: TD 0.2V/div.
Normal mode: play

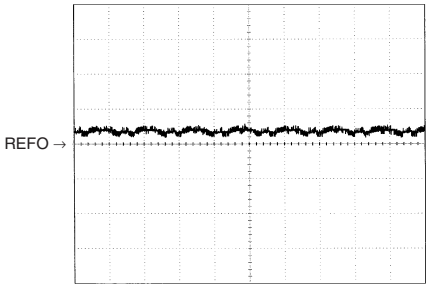


⑧ CH1: TE 0.5V/div. 5ms/div.
⑪ CH2: SD 0.5V/div.
TEST mode: 100 Tracks jump (FWD)

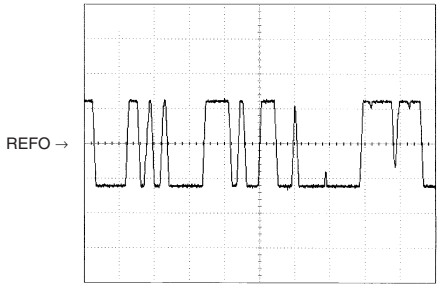


⑩ MD 0.5V/div. 0.1s/div.

Normal mode: Play (12cm)

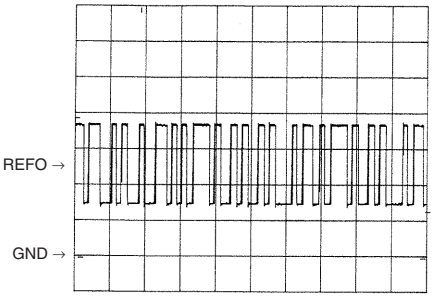


⑩ MD 1V/div. 10ms/div.
Normal mode:
Long Search (12cm)

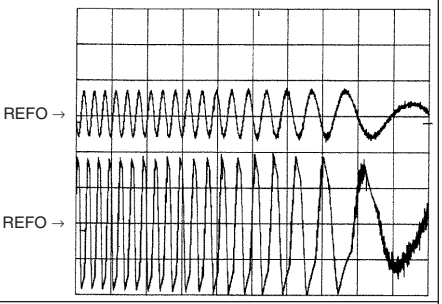


⑫ EFM 1V/div. 5µs/div.

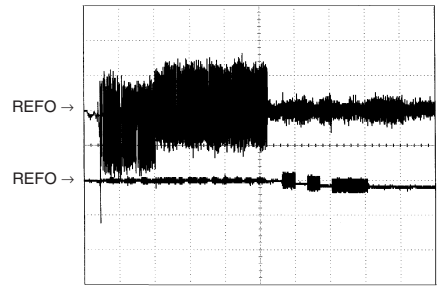
Normal mode: play



⑧ CH1: TE 1V/div. 2ms/div.
⑬ CH2: TEC 1V/div.
Test mode: Focus close
Tracking open

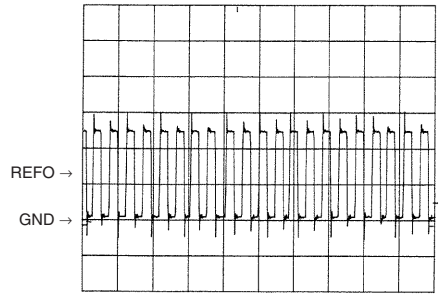


⑧ CH1: TE 0.5V/div. 0.2s/div.
⑥ CH2: FE 0.5V/div.
Normal mode: AGC after focus close



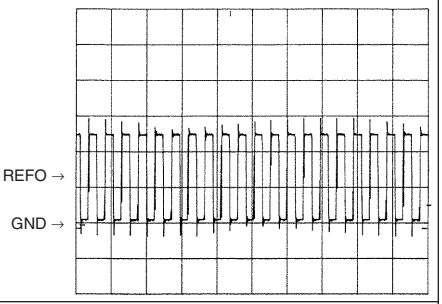
⑭ PLCK 2V/div. 0.5µs/div.

Normal mode: play



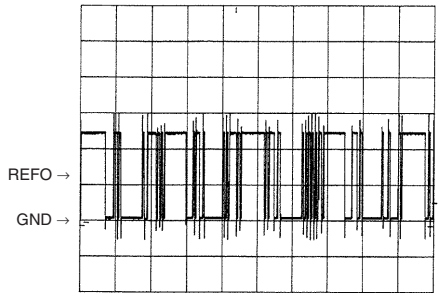
⑮ SCKO 2V/div. 1µs/div.

Normal mode: play



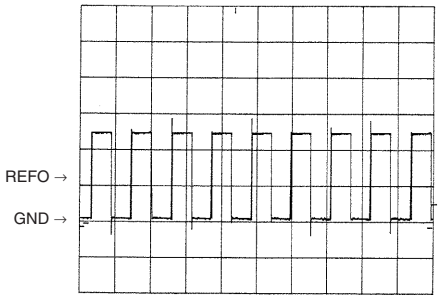
⑯ Dout 2V/div. 10µs/div.

Normal mode: play



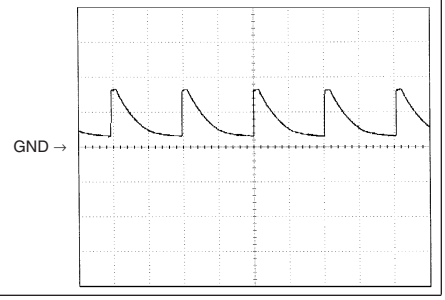
⑰ LRCK 2V/div. 20µs/div.

Normal mode: play

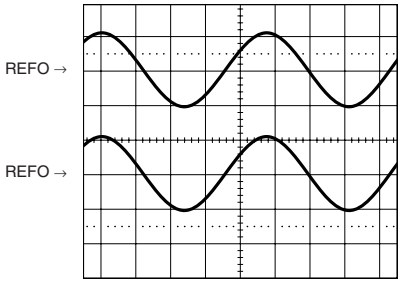


⑱ VD 5V/div. 50ms/div.

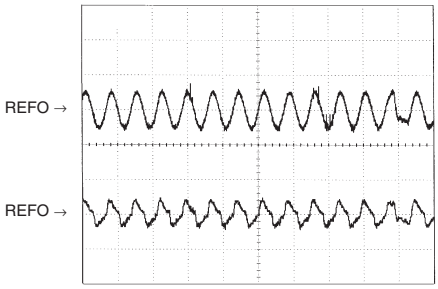
Normal mode: No disc



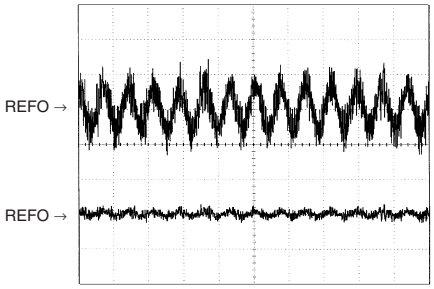
⑲ CH1: R OUT 1V/div. 0.2ms/div.
⑳ CH2: L OUT 1V/div.
Normal mode: Play (1kHz 0dB)



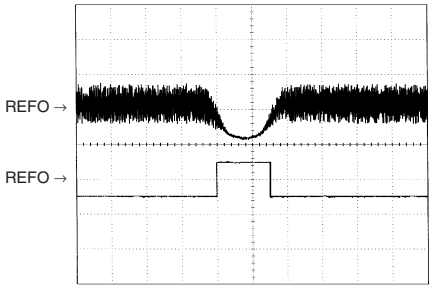
⑥ CH1: FE 0.2V/div. 1ms/div.
③ CH2: FD 0.5V/div.
Normal mode: During AGC



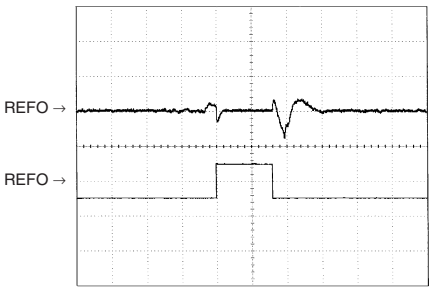
⑧ CH1: TE 0.2V/div. 1ms/div.
⑨ CH2: TD 0.5V/div.
Normal mode: During AGC



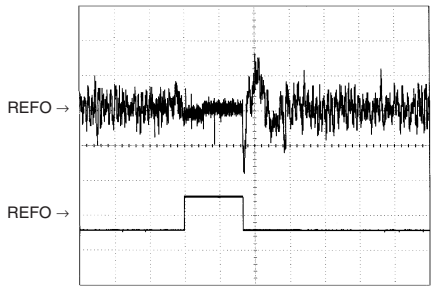
① CH1: RFI 1V/div. 0.5ms/div.
㉑ CH2: HOLD 5V/div.
Normal mode: The defect part passes 800µm(B.D)



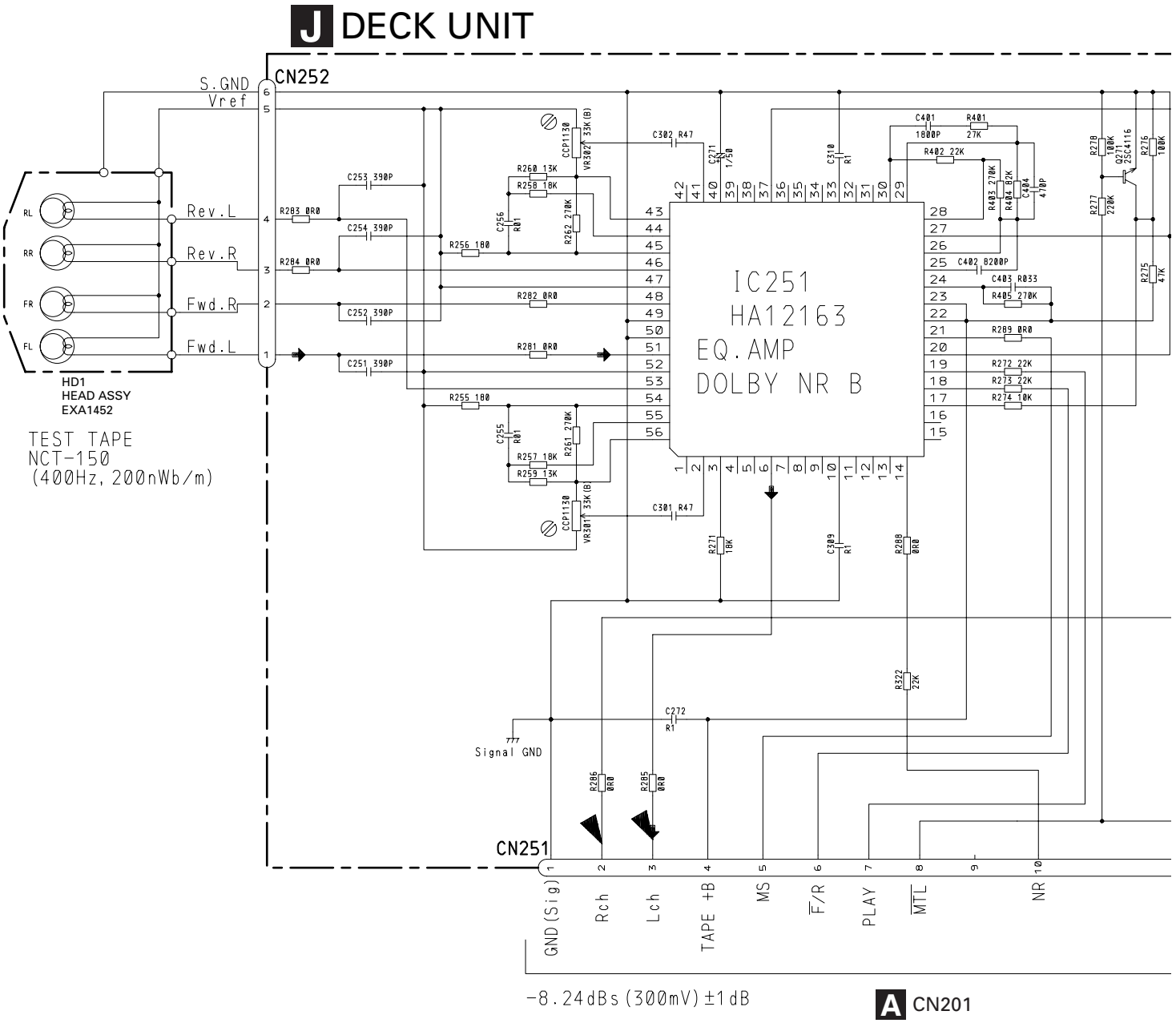
③ CH1: FD 1V/div. 0.5ms/div.
㉑ CH2: HOLD 5V/div.
Normal mode: The defect part passes 800µm(B.D)

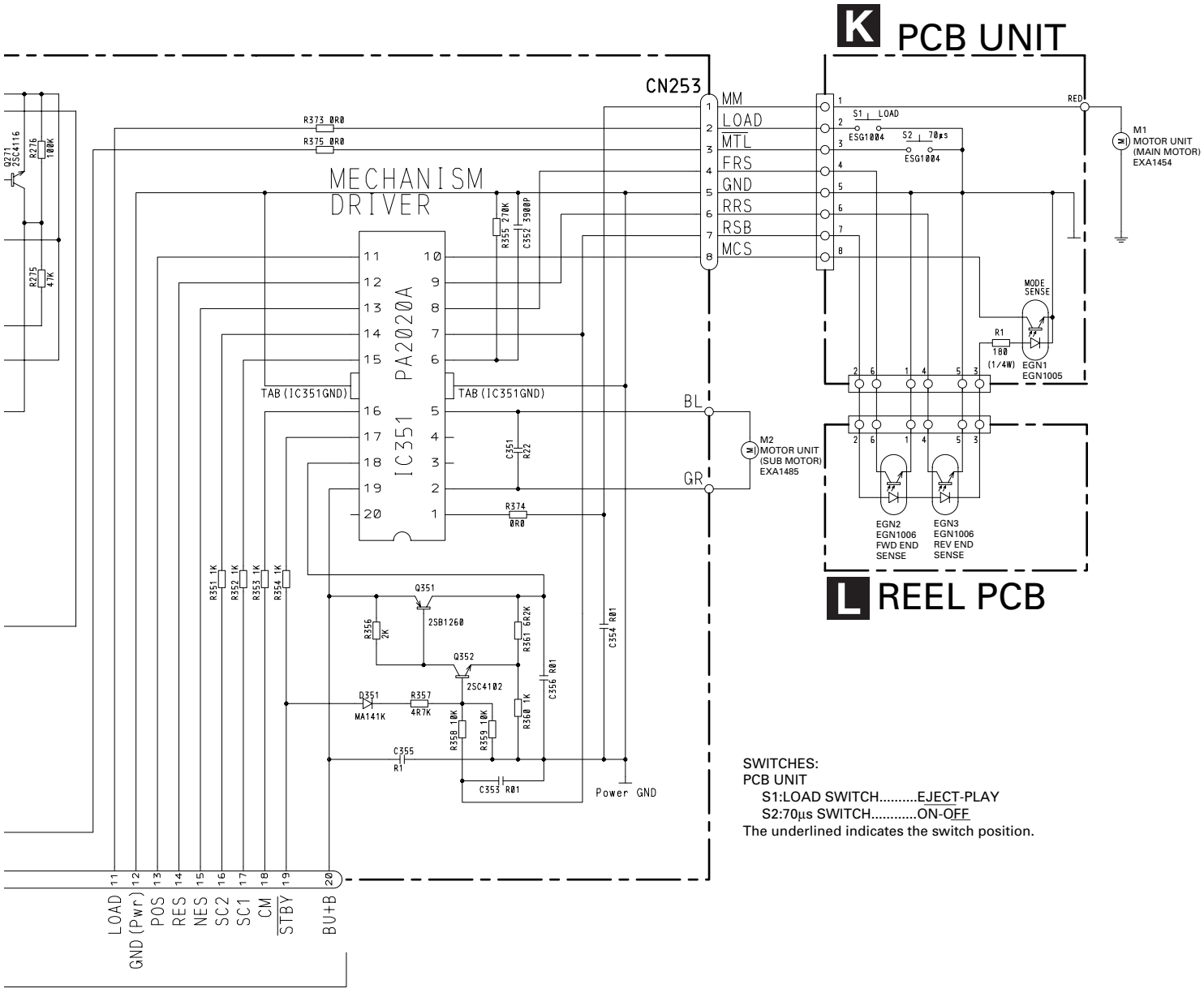


⑨ CH1: TD 0.1V/div. 0.5ms/div.
㉑ CH2: HOLD 5V/div.
Normal mode: The defect part passes 800µm(B.D)



3.7 CASSETTE MECHANISM MODULE





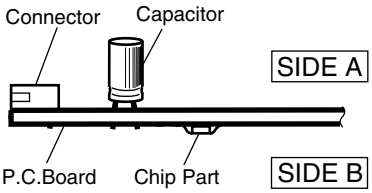
SWITCHES:
PCB UNIT
S1:LOAD SWITCH.....EJECT-PLAY
S2:70µs SWITCH.....ON-OFF
The underlined indicates the switch position.

4. PCB CONNECTION DIAGRAM

4.1 AUDIO AMP UNIT

NOTE FOR PCB DIAGRAMS

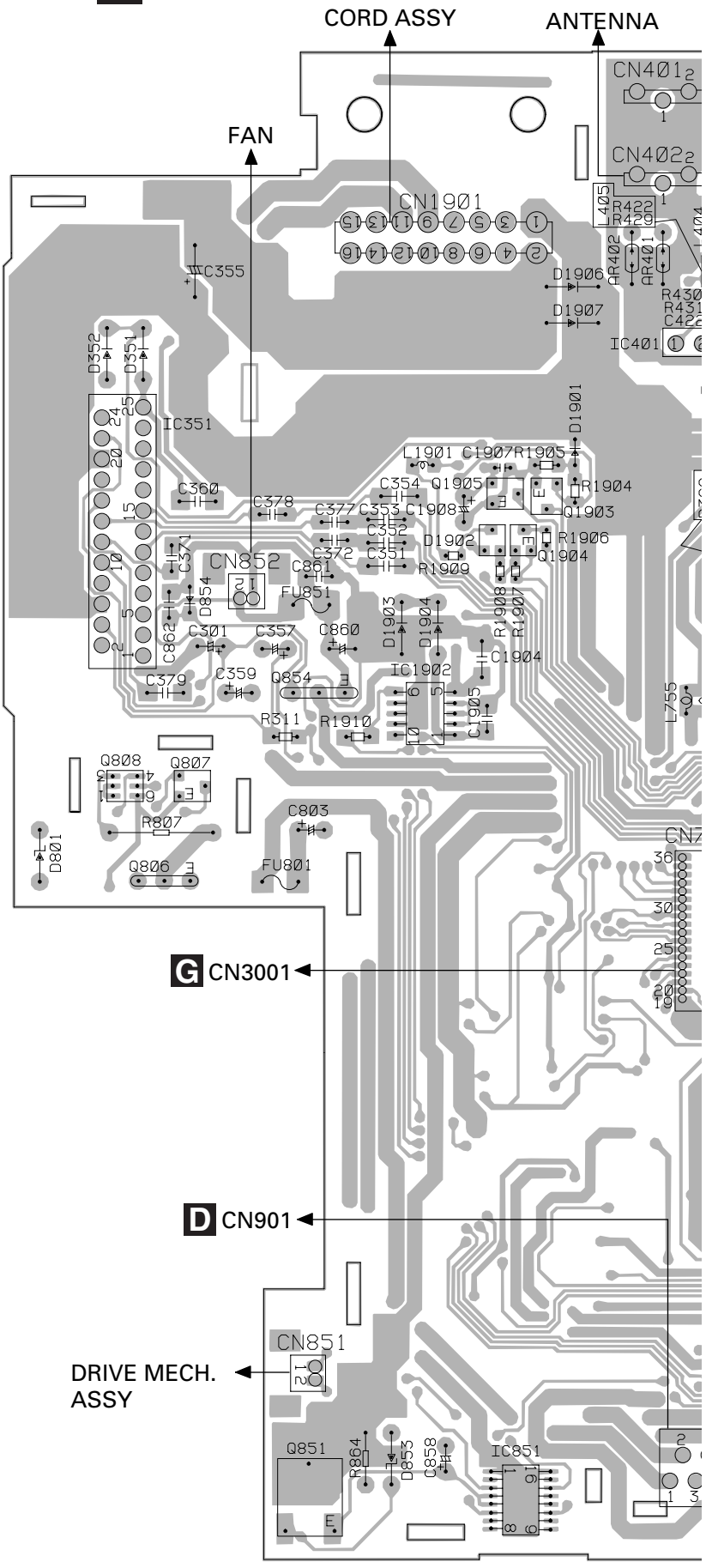
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



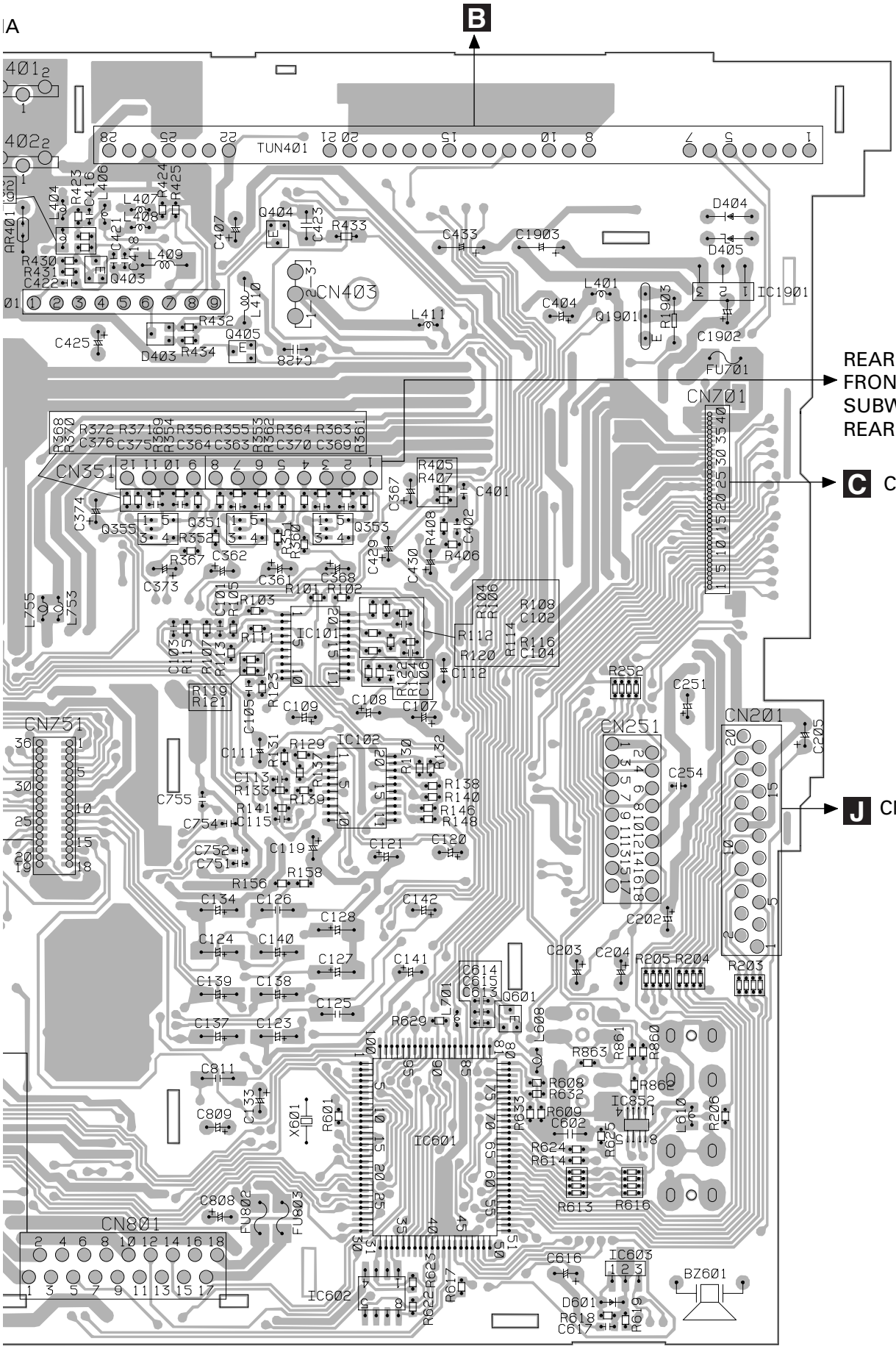
IC, Q

Q404
Q403
IC1901
IC401
Q1901 Q1902
Q405
IC351
Q1905
Q1903
Q1904
Q351 Q353
Q355
IC1902
Q854
IC101
Q807
Q808
IC102
Q806
Q601
IC852
IC601
IC851 IC603
Q851
IC602

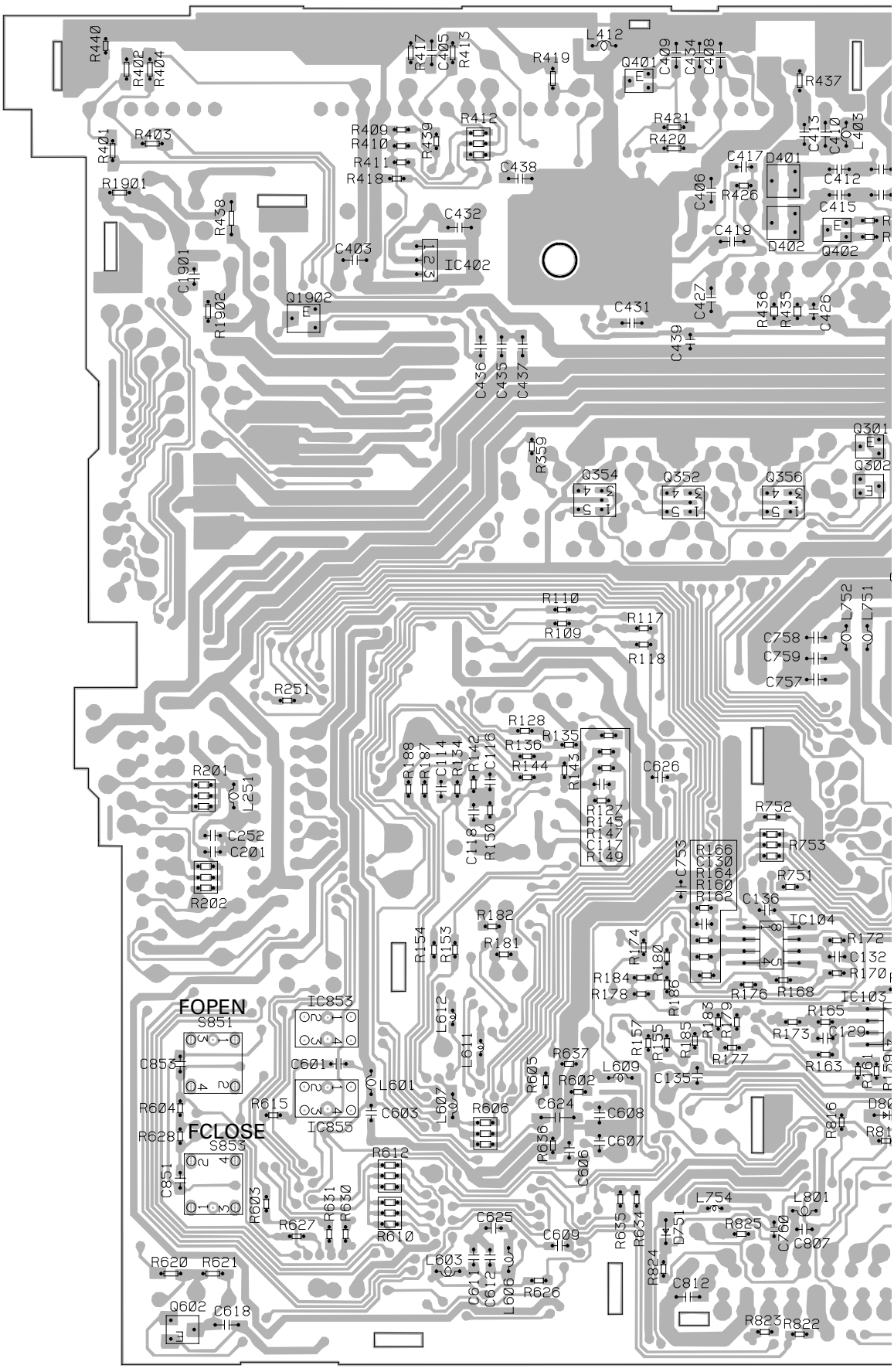
A AUDIO AMP UNIT



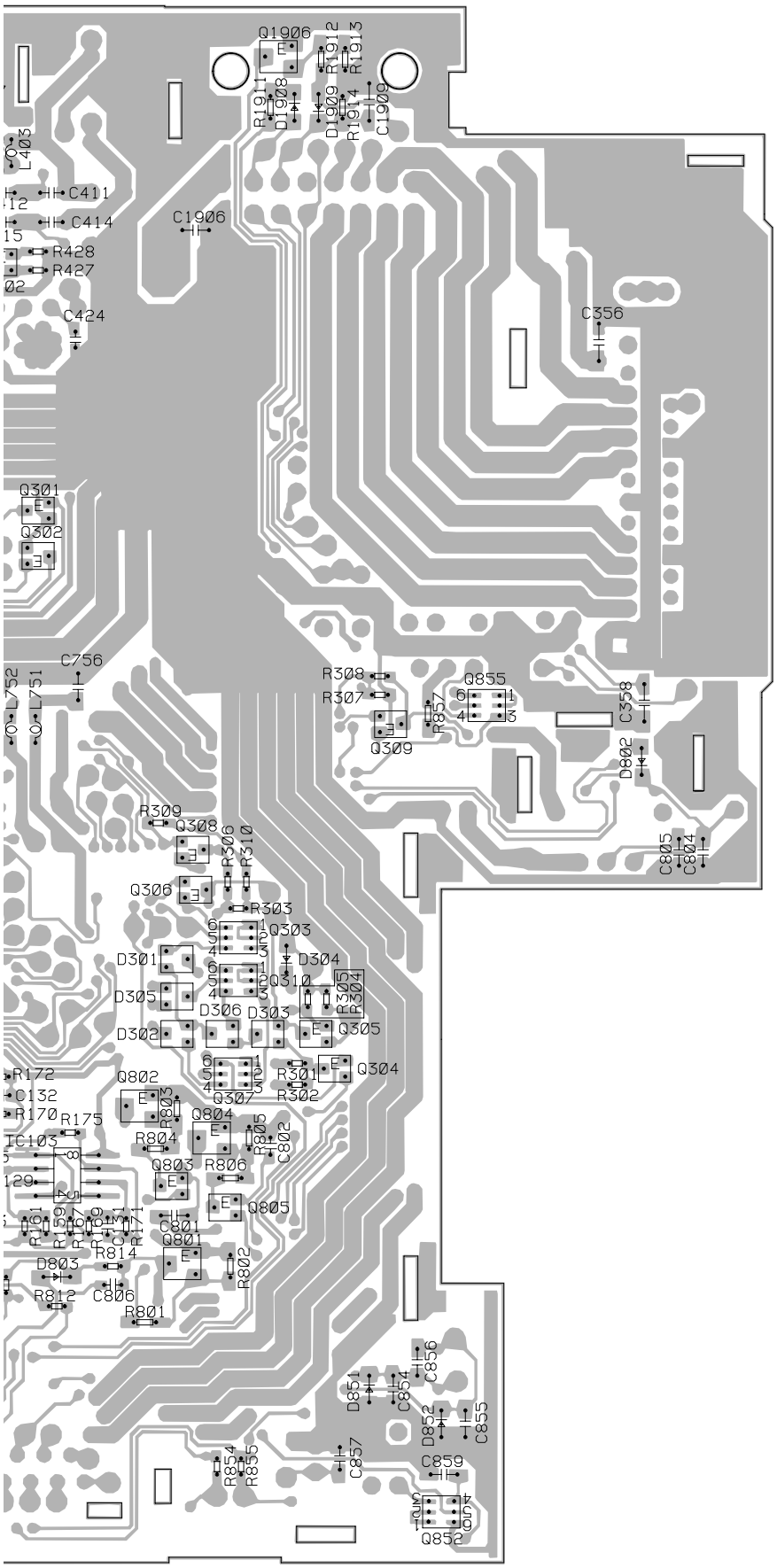
SIDE A


B
REAR(UC MODEL)
FRONT
SUBWOOFER/
REAR
C CN1251
J CN251
TUN401
CN403
CN351
CN701
CN751
CN251
CN201
CN801
IC1901
IC101
IC102
IC601
IC602
IC603
IC852
Q601
Q1901
D404
D405
D403
BZ601
FU701
FU802
FU803
X601

A AUDIO AMP UNIT



SIDE B

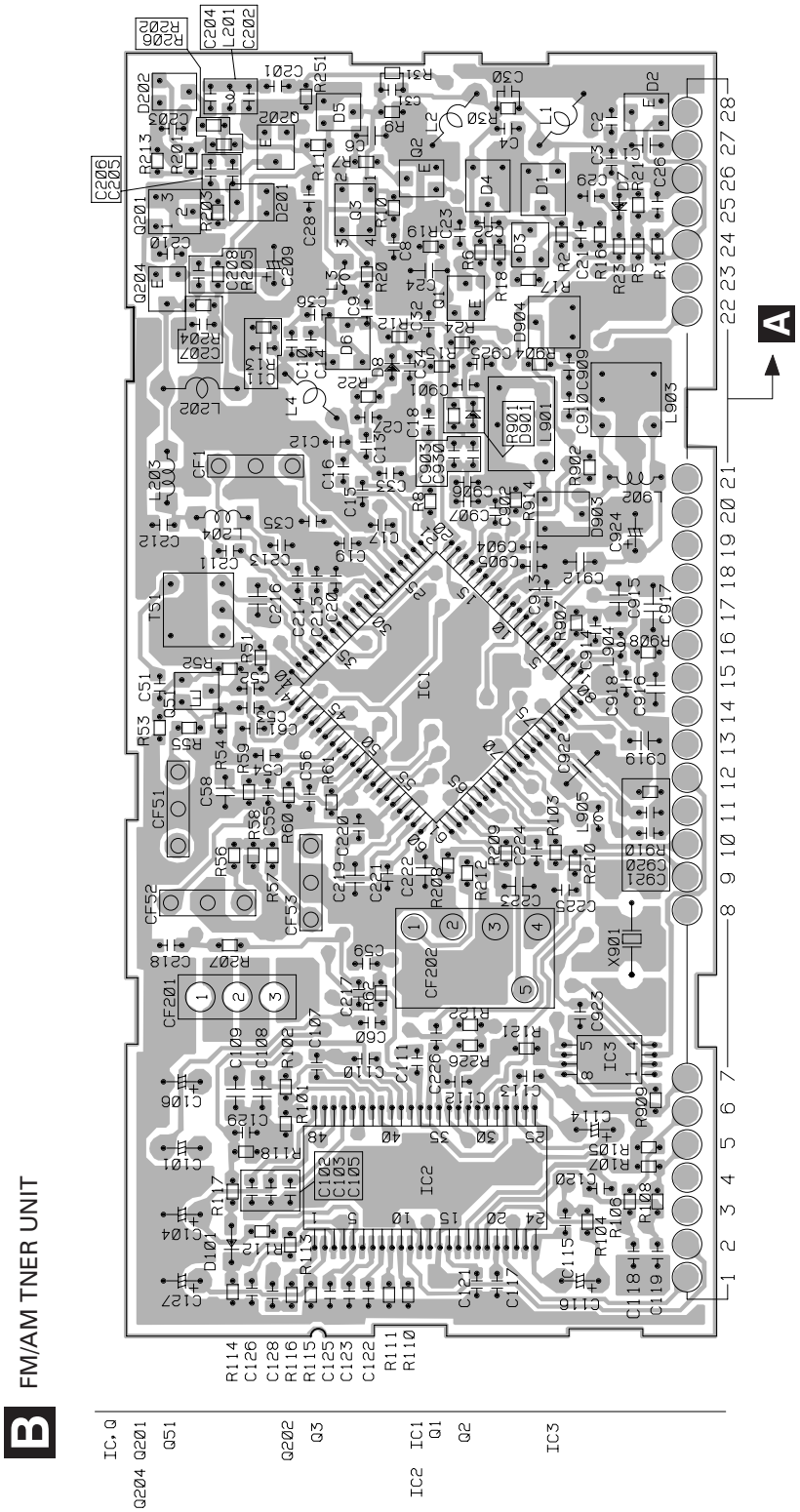


IC, Q

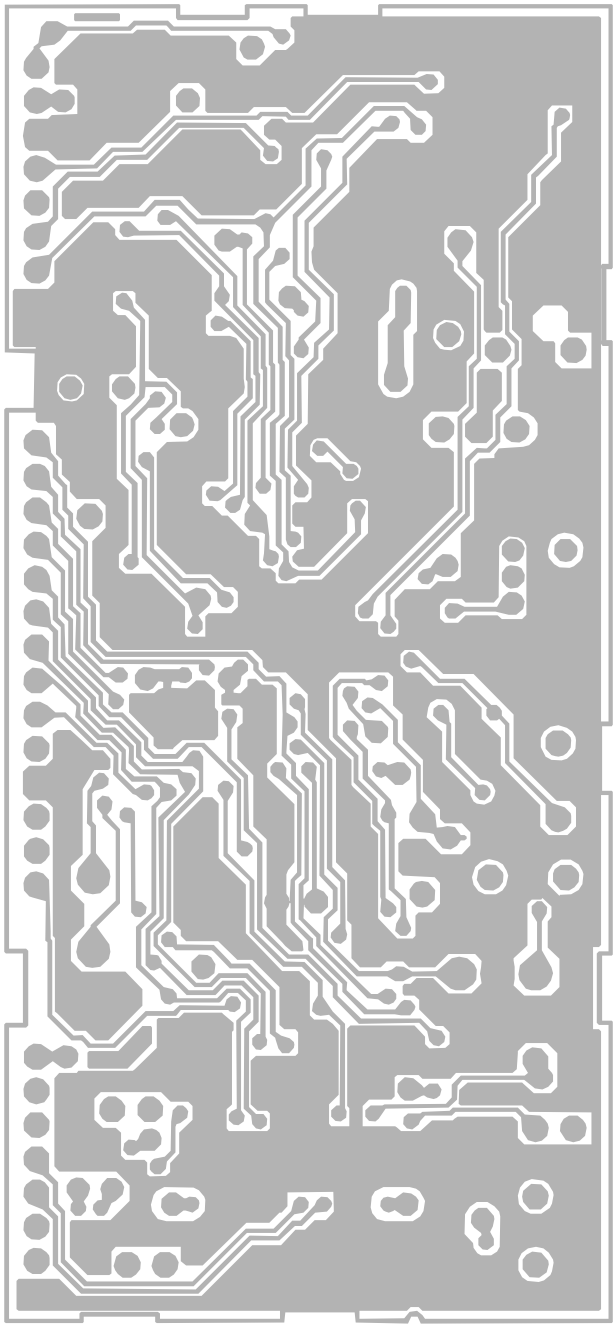
Q1906	
Q401	A
Q402	
IC402	
Q301	
Q302	B
Q354 Q352	
Q356	
Q855	
Q309	
Q308	
Q306	
Q303	
Q310	C
Q305	
IC104	
Q304	
Q802	
Q804 Q307	
IC853 IC103	
Q803	
Q805	
Q801	
IC855	D
Q602	
Q852	

4.2 FM/AM TUNER UNIT

SIDE A

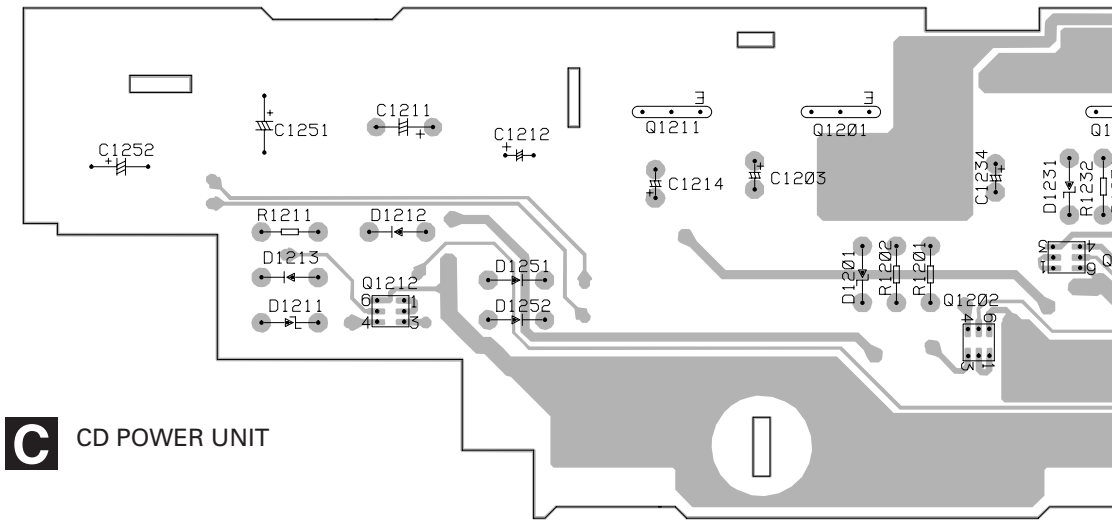


SIDE B

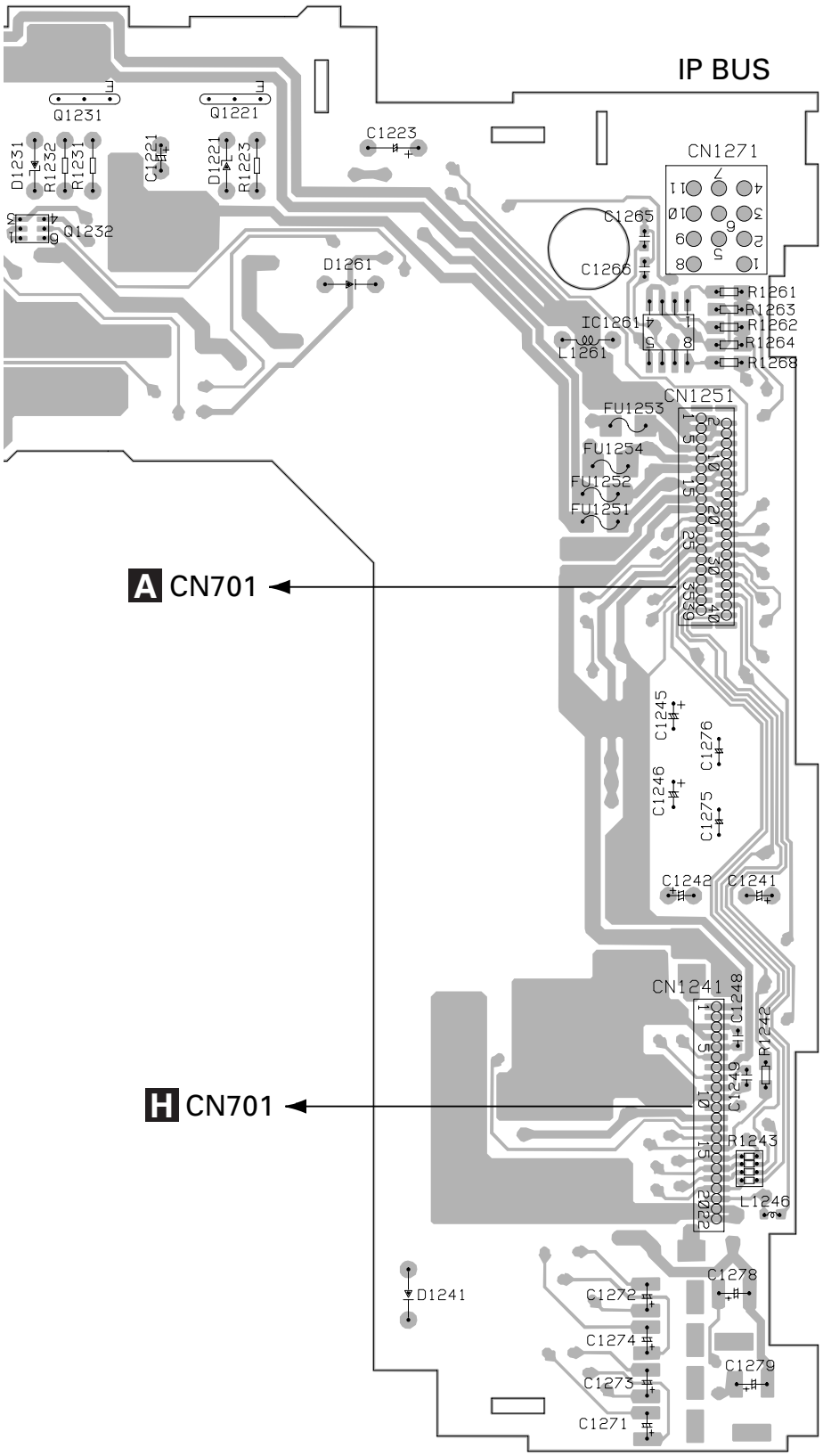


B FM/AM TNER UNIT

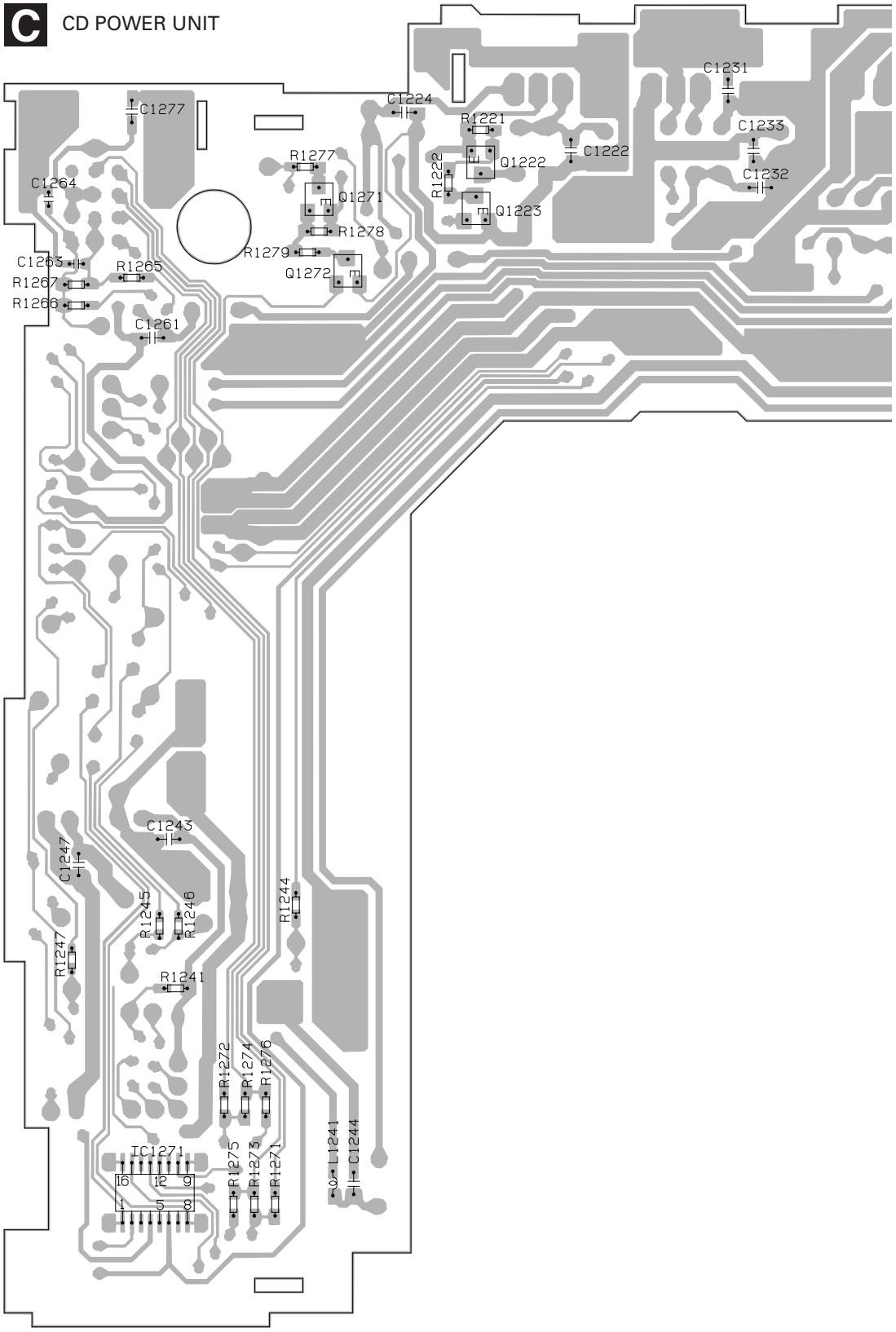
4.3 CD POWER UNIT

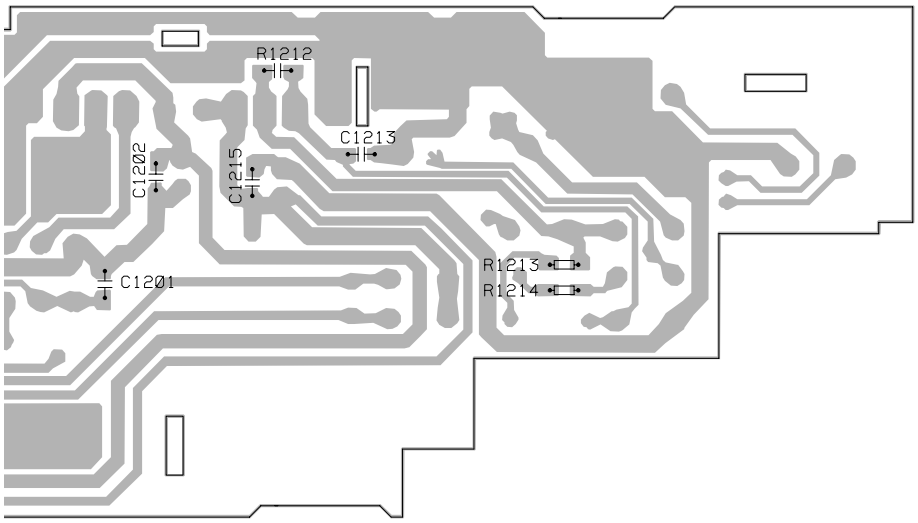


SIDE A


IP BUS
Q1231
Q1221
C1223
CN1271
D1231
R1232
R1231
C1231
D1221
R1223
C1265
Q1232
C1266
D1261
R1261
R1263
R1262
R1264
R1268
IC1261
L1261
CN1251
FU1253
FU1254
FU1252
FU1251
A CN701
C1245
C1276
C1246
C1275
C1242
C1241
CN1241
C1248
R1242
C1249
H CN701
R1243
L1246
D1241
C1278
C1272
C1274
C1279
C1273
C1271

C CD POWER UNIT





IC, Q

SIDE B

Q1222

Q1271
Q1223

Q1272

IC1271

A

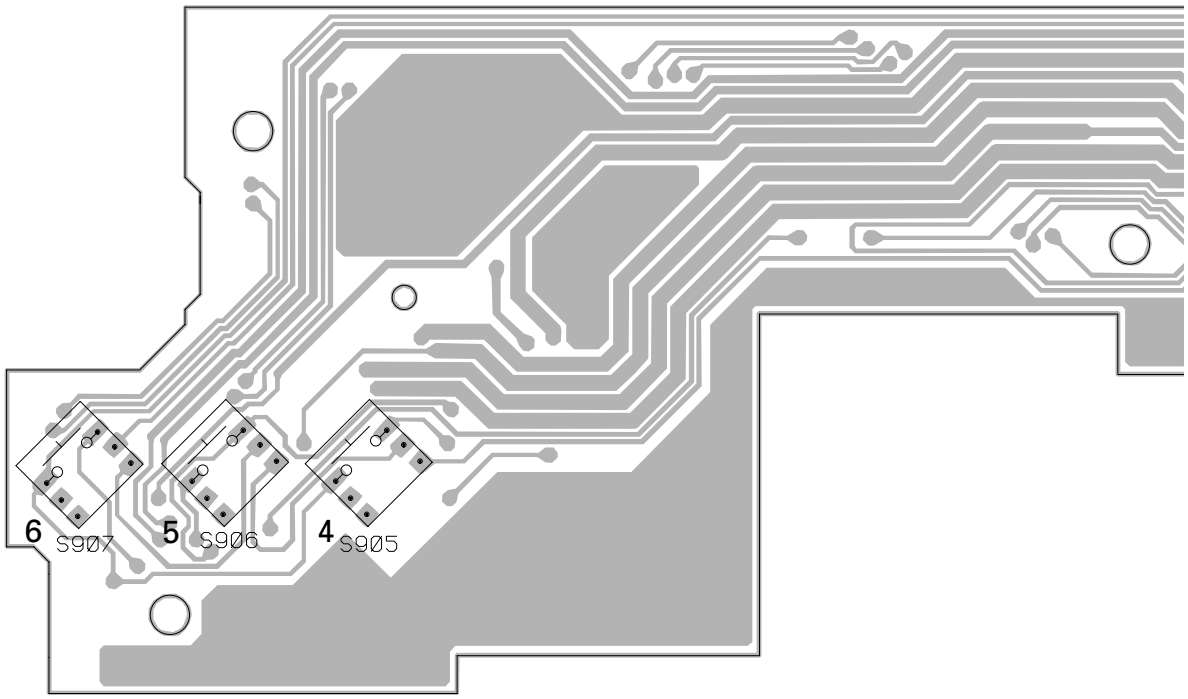
B

C

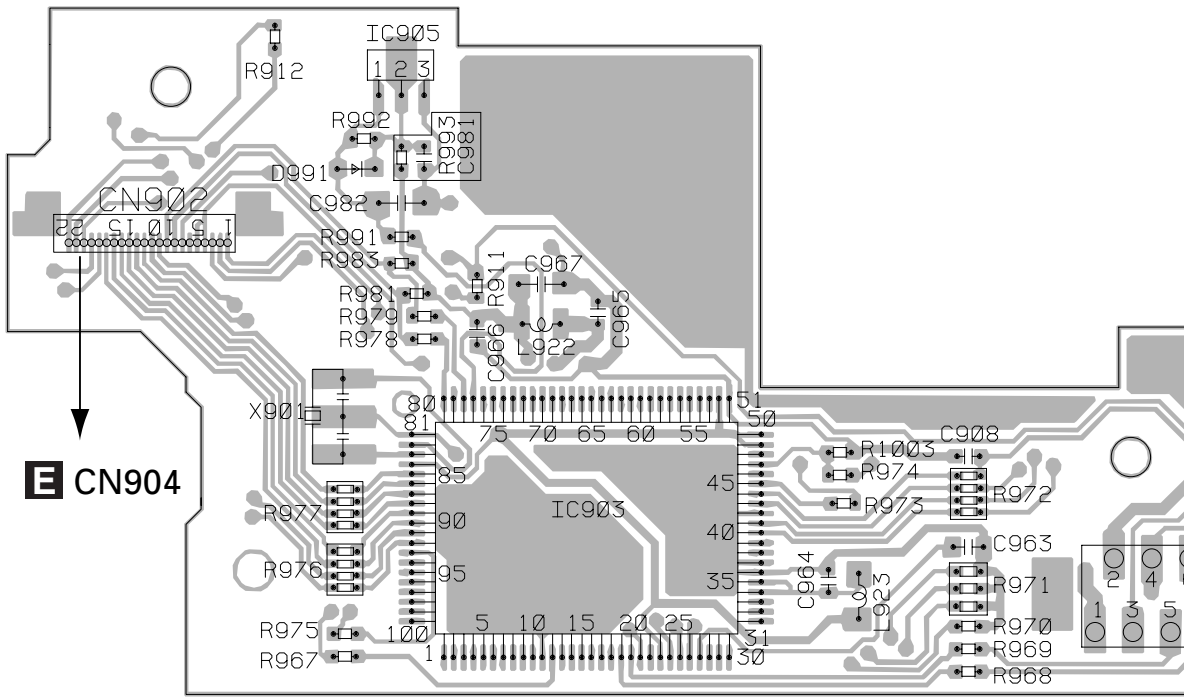
D

4.4 GRILLE PCB(A)

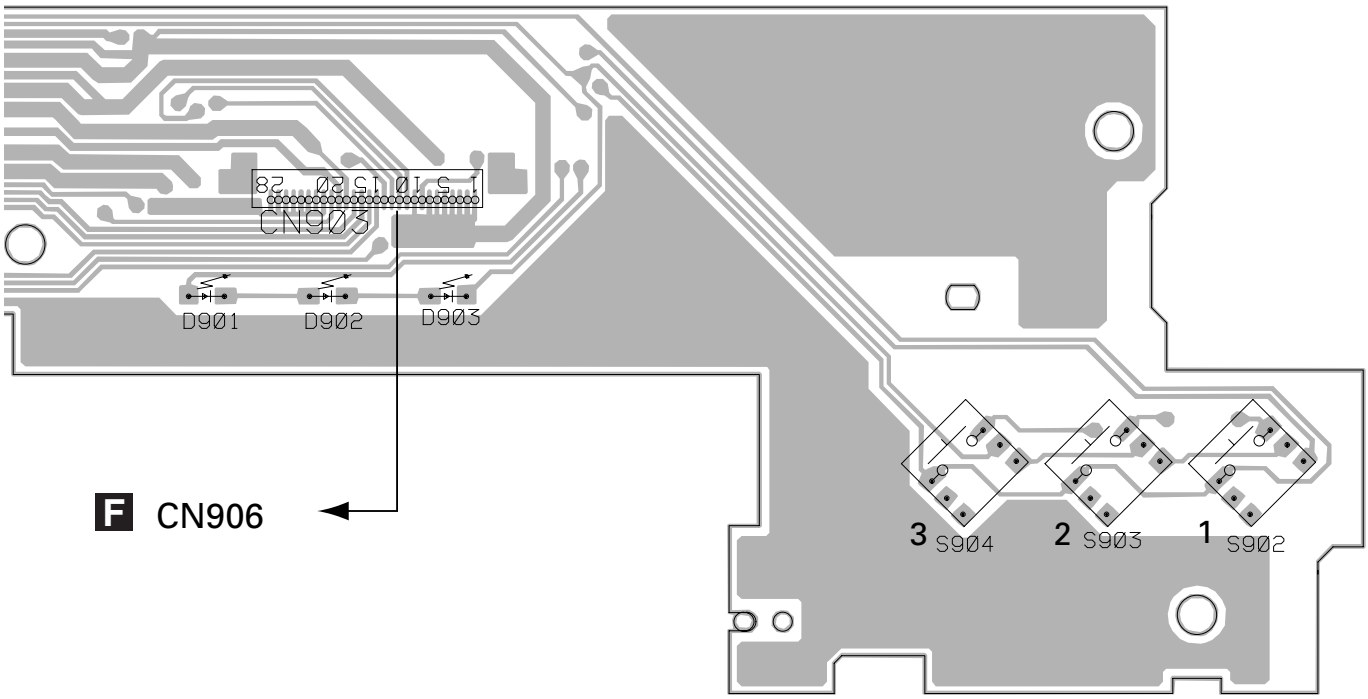
D GRILLE PCB(A)



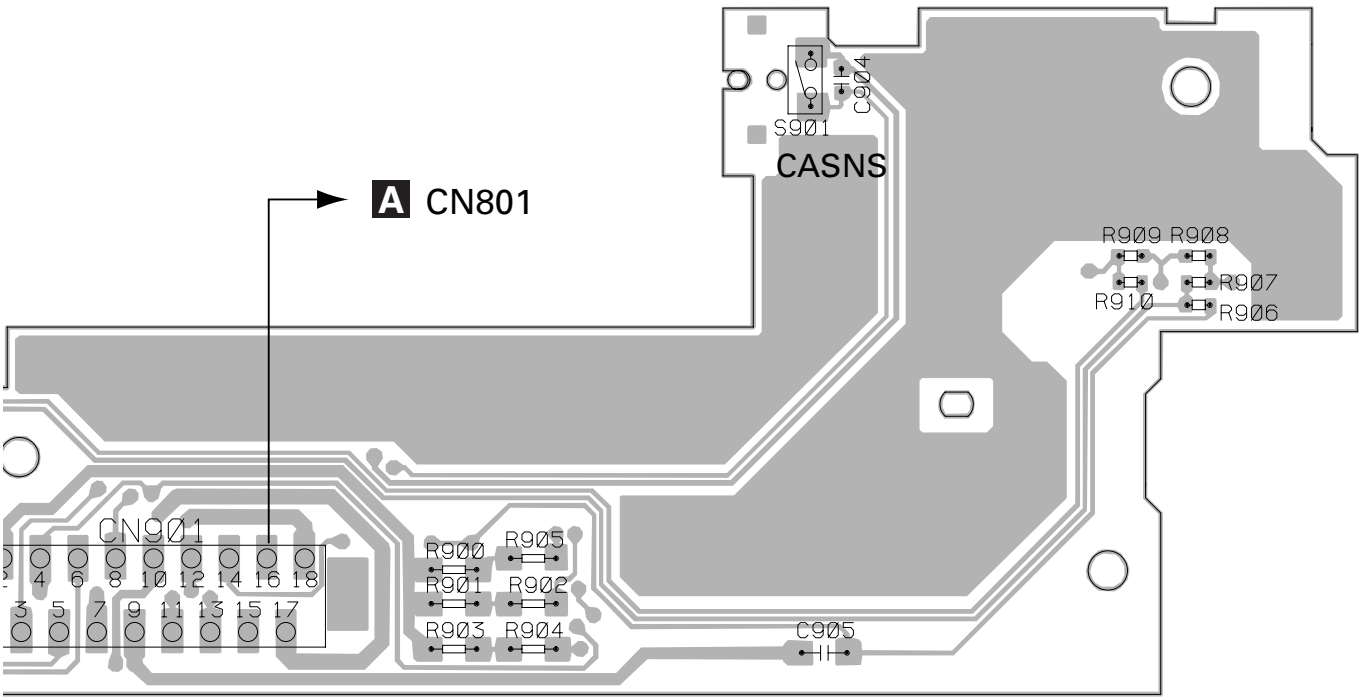
D GRILLE PCB(A)



SIDE A

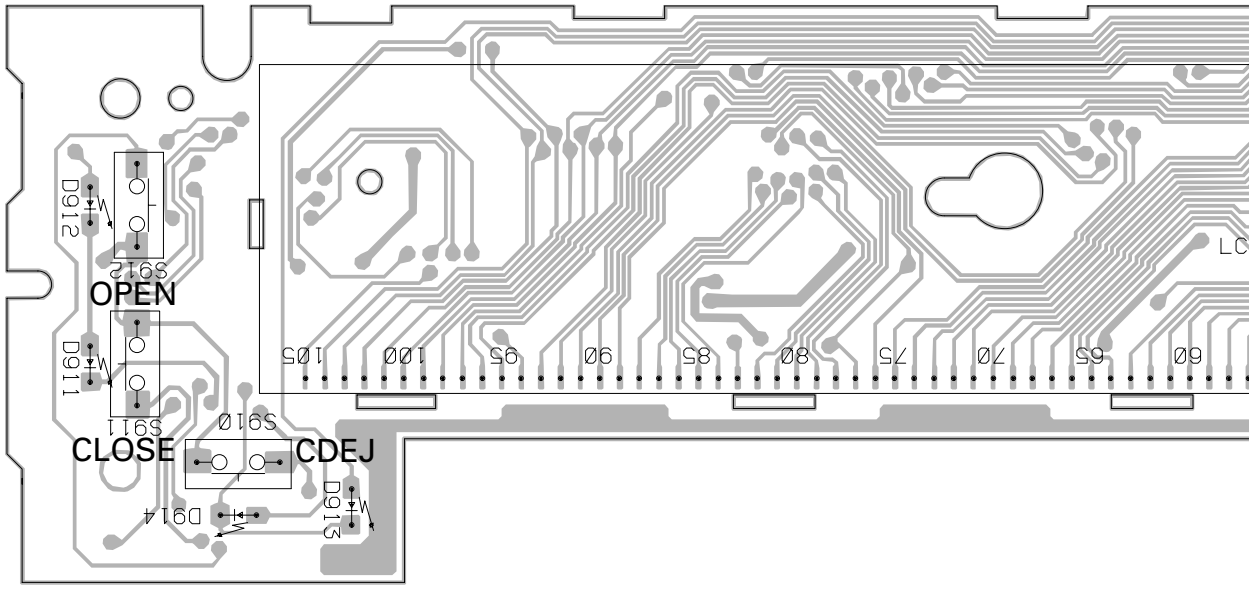

CN903
D901
D902
D903
F CN906
3 S904
2 S903
1 S902

SIDE B

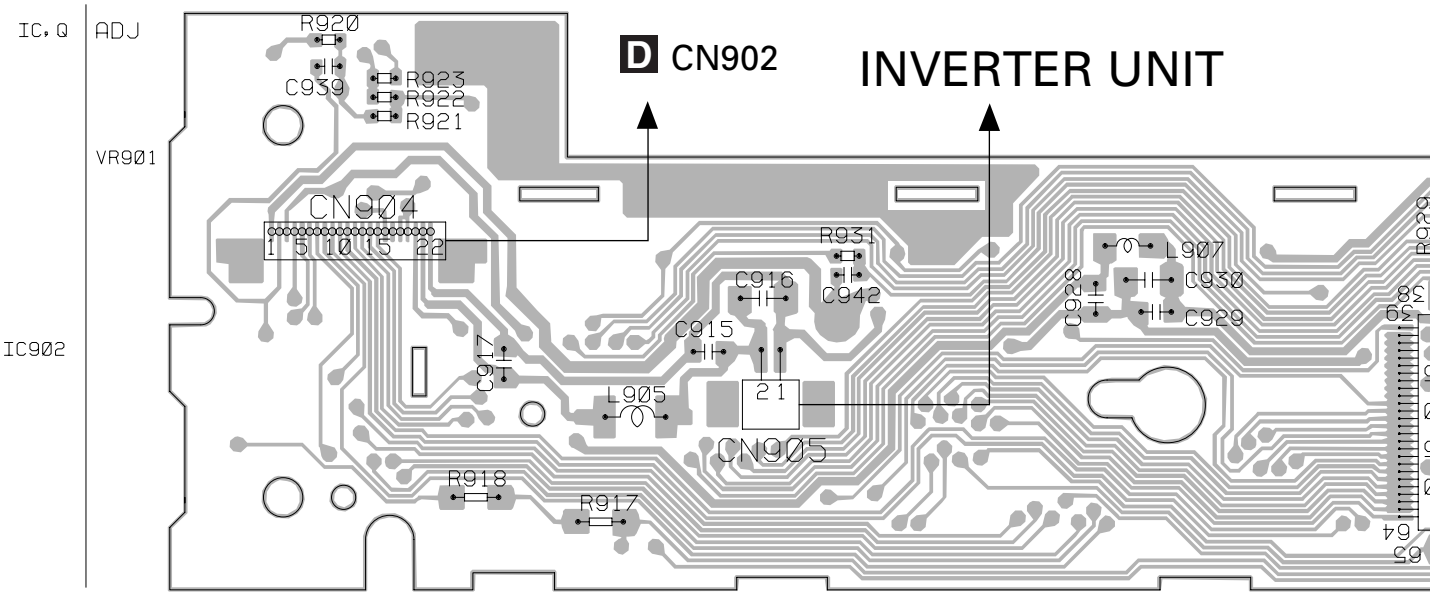

S901
C904
CASNS
A CN801
R909 R908
R907
R910
R906
CN901
R900 R905
R901 R902
R903 R904
C905
IC, Q
IC905
IC903

4.5 GRILLE PCB(B)

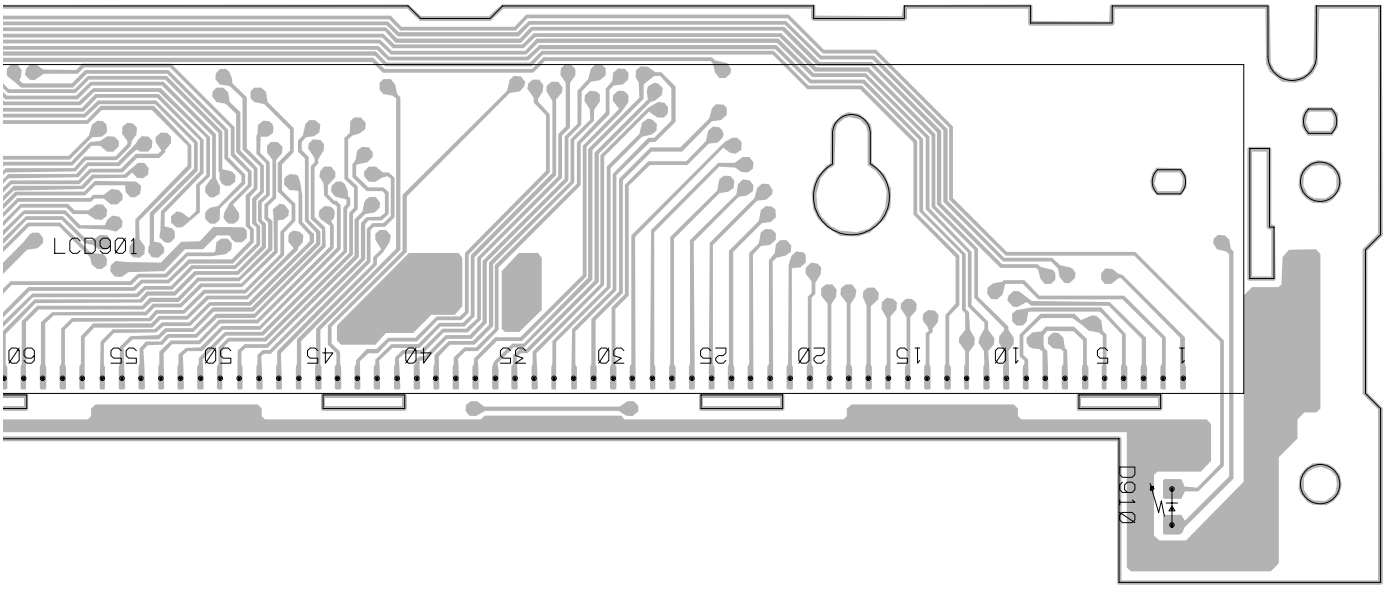
E GRILLE PCB(B)



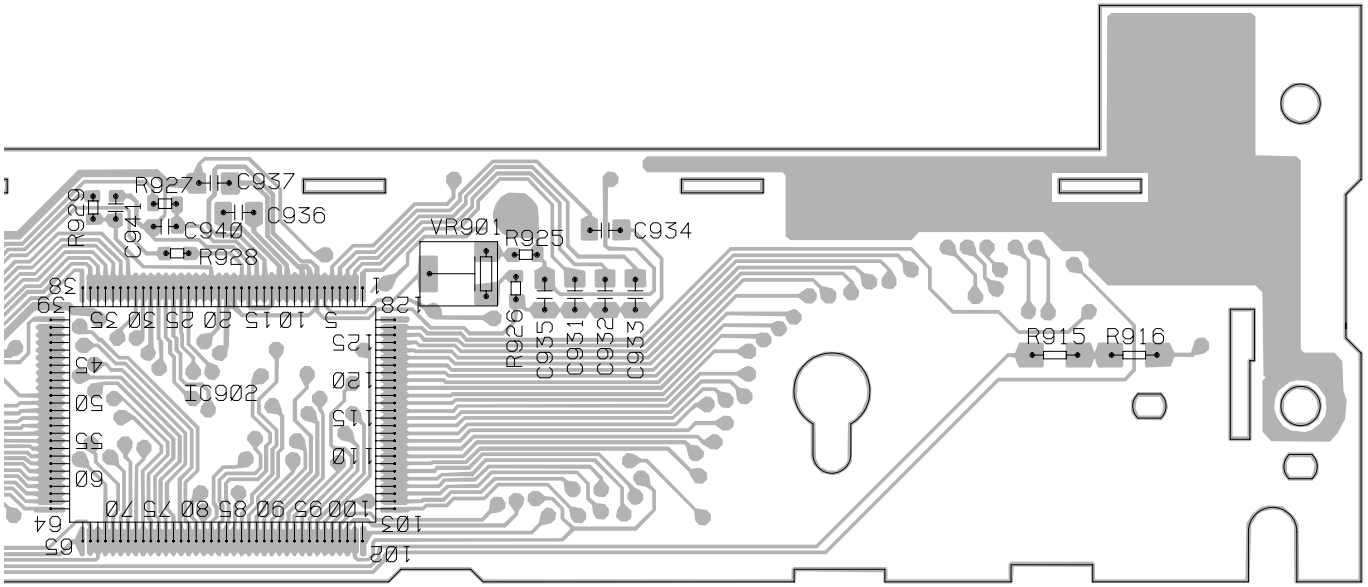
E GRILLE PCB(B)



SIDE A



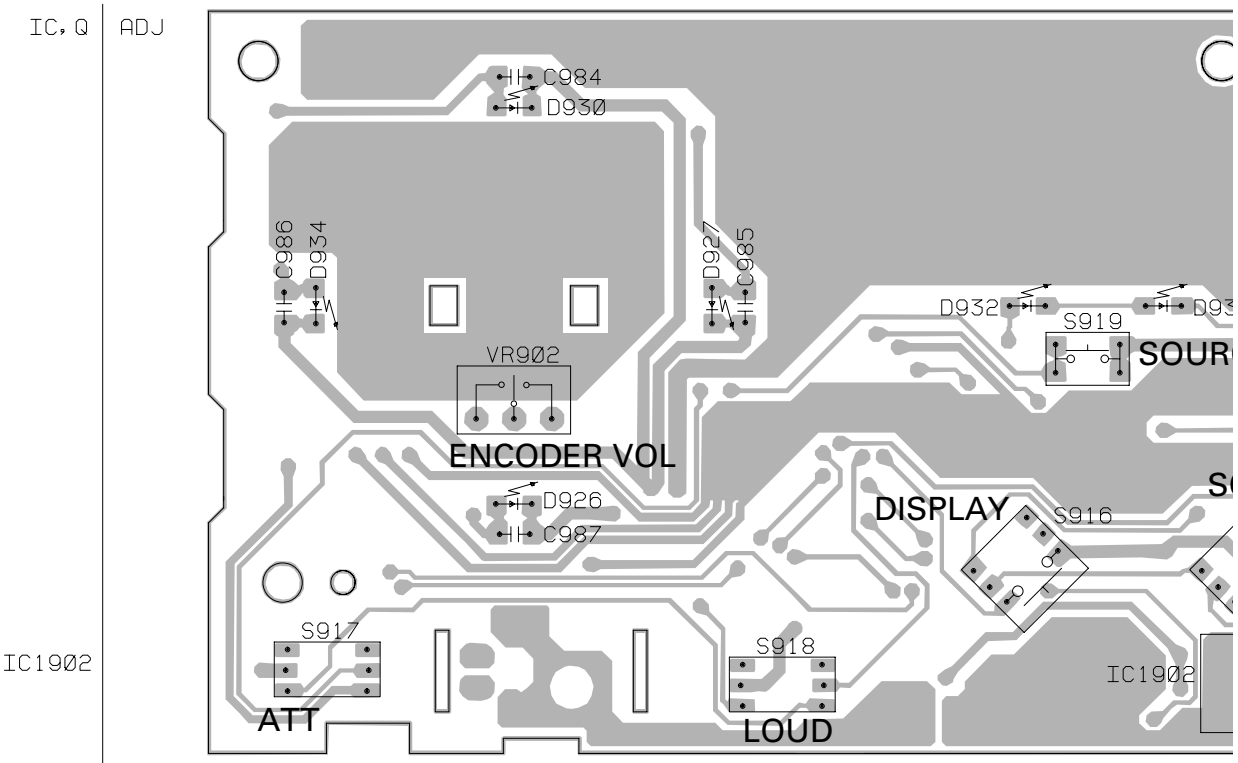
SIDE B



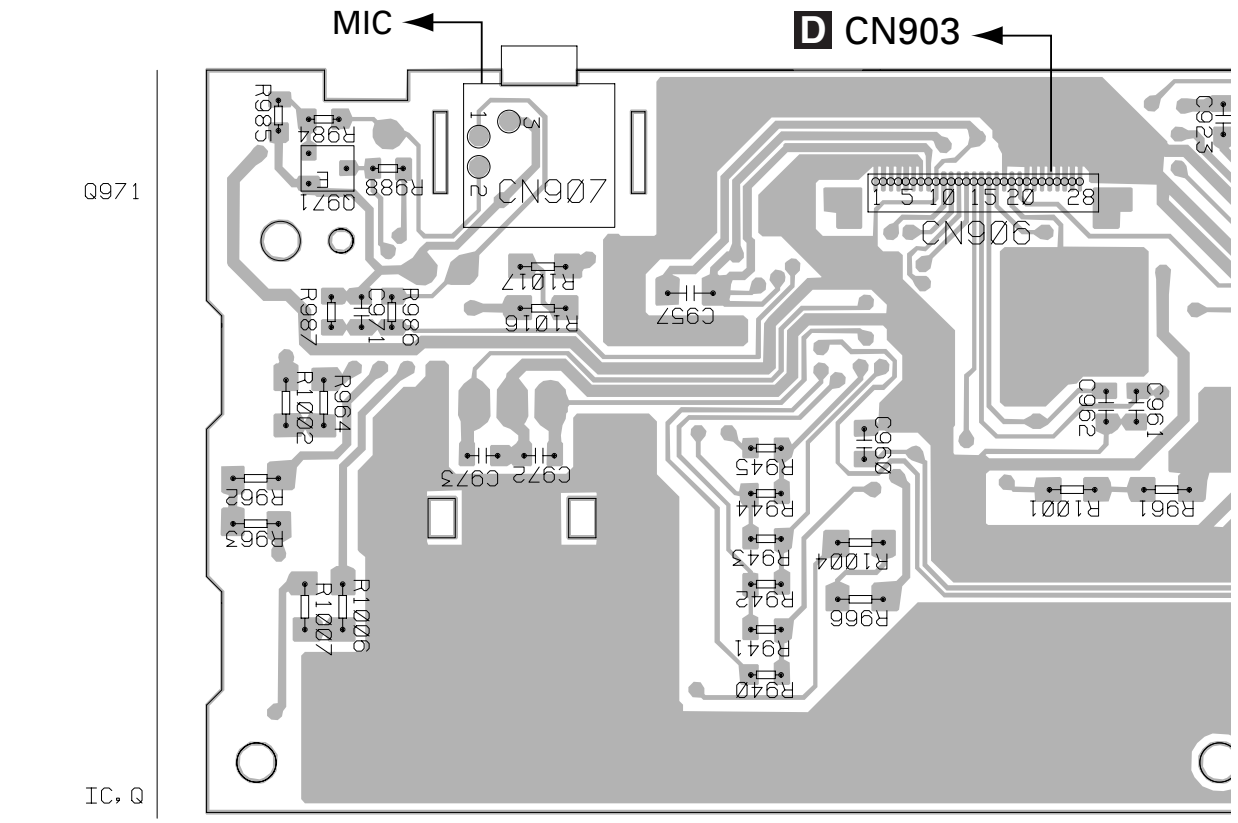
A B C D

4.6 FLAP PCB UNIT

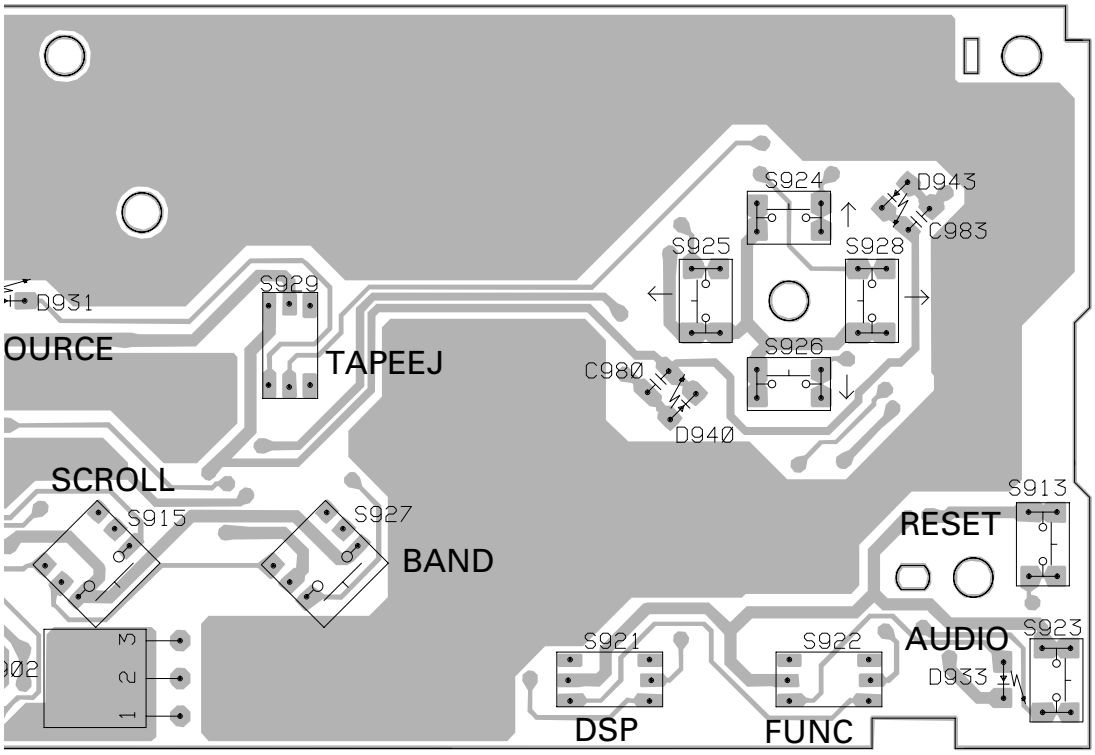
F FLAP PCB UNIT



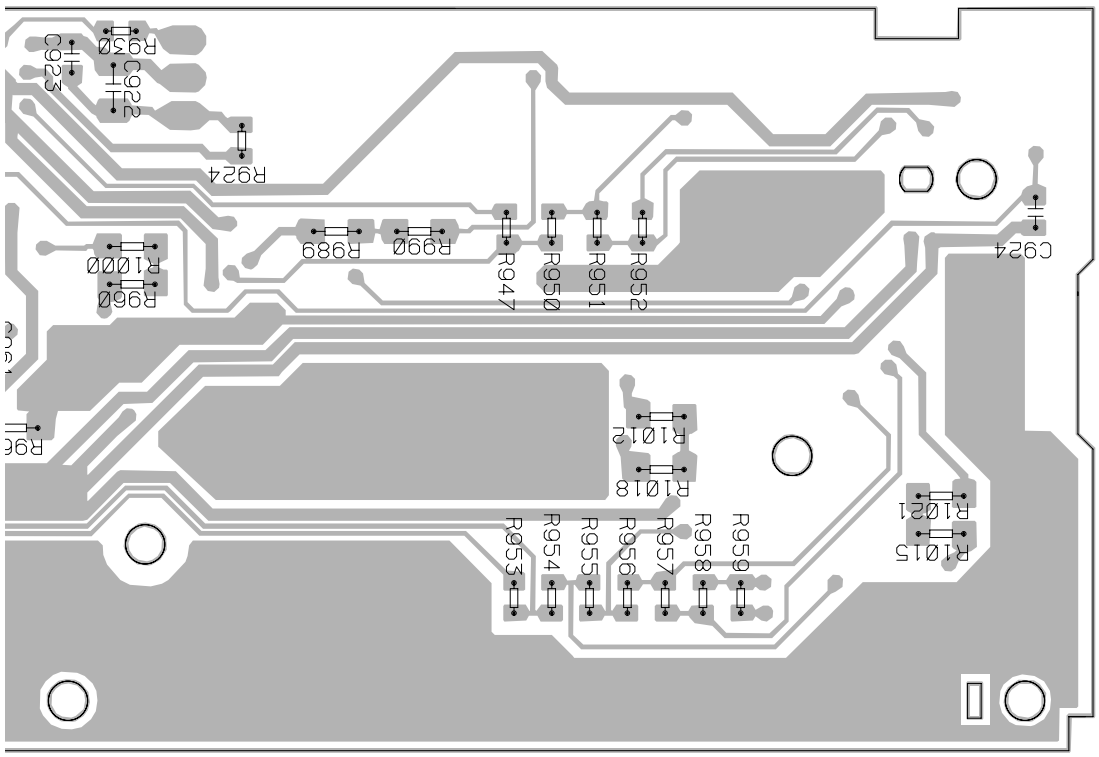
F FLAP PCB UNIT



SIDE A


D931
OURCE
S929
TAPEEJ
S924
D943
C983
S925
S928
S926
C980
D940
SCROLL
S915
S927
BAND
S913
RESET
S921
S922
AUDIO
S923
D933
DSP
FUNC

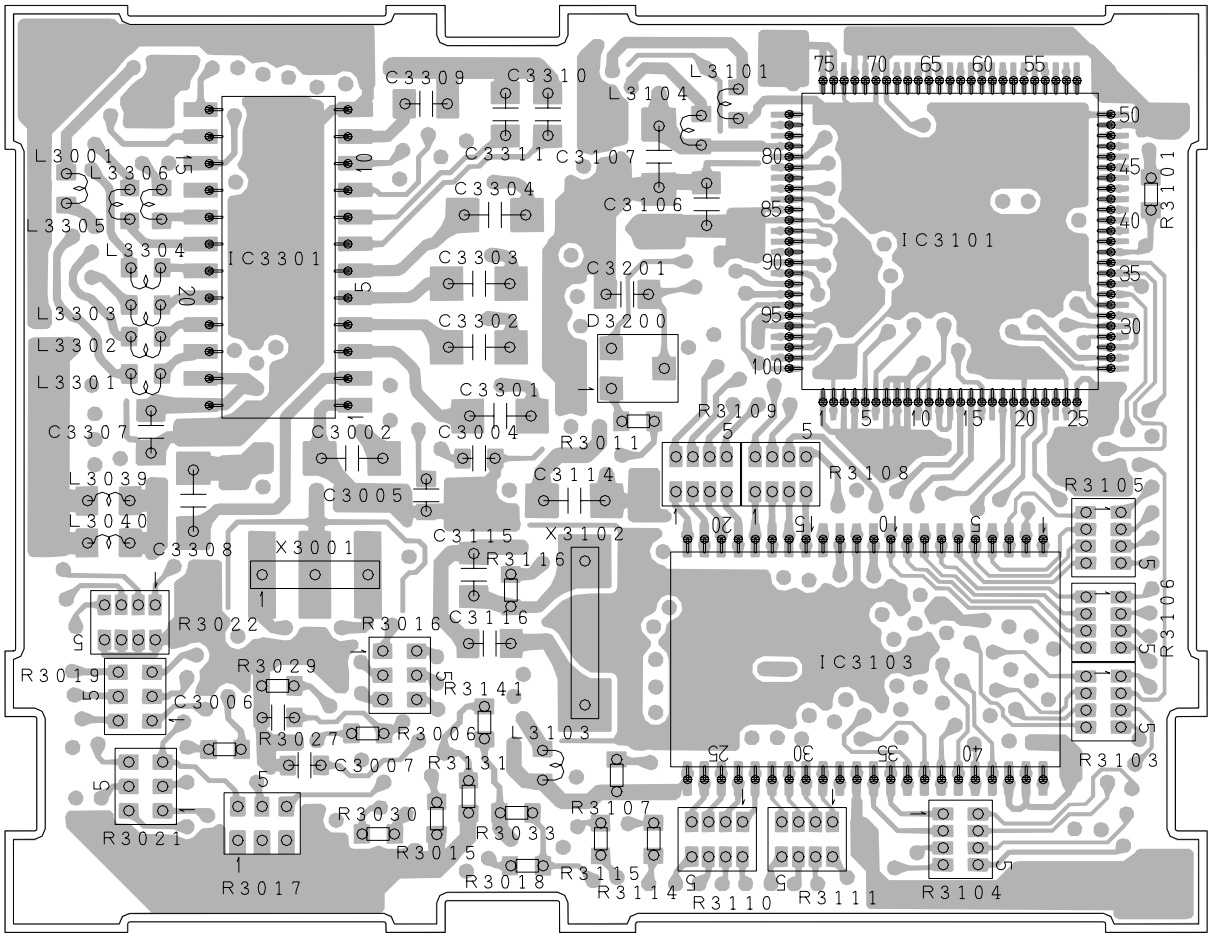
SIDE B


C923
R930
C922
R924
R1000
R960
R989
R990
R947
R950
R951
R952
C924
R1012
R1018
R1021
R1015
R953
R954
R955
R956
R957
R958
R959

4.7 DSP UNIT

SIDE A

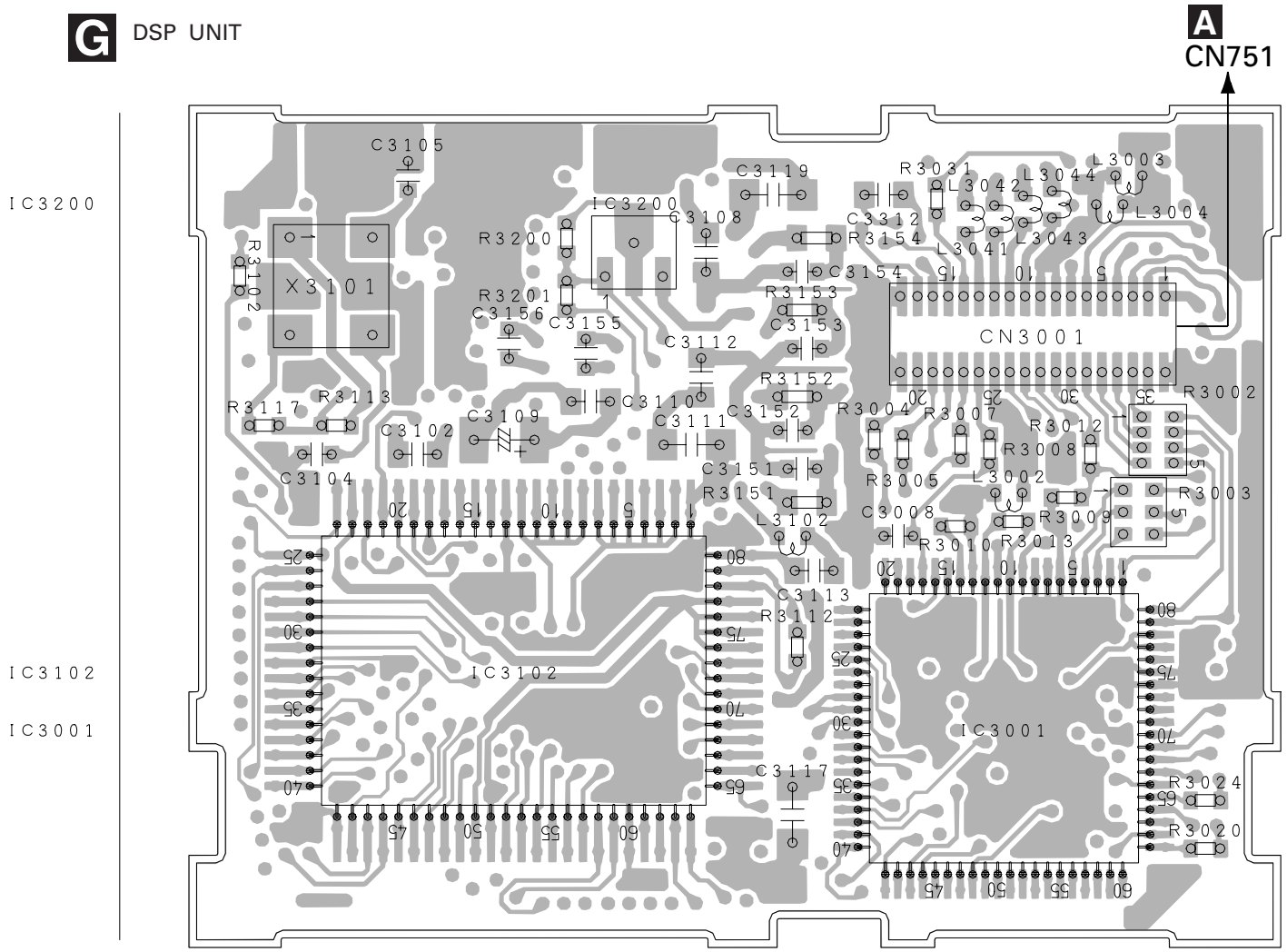
G DSP UNIT



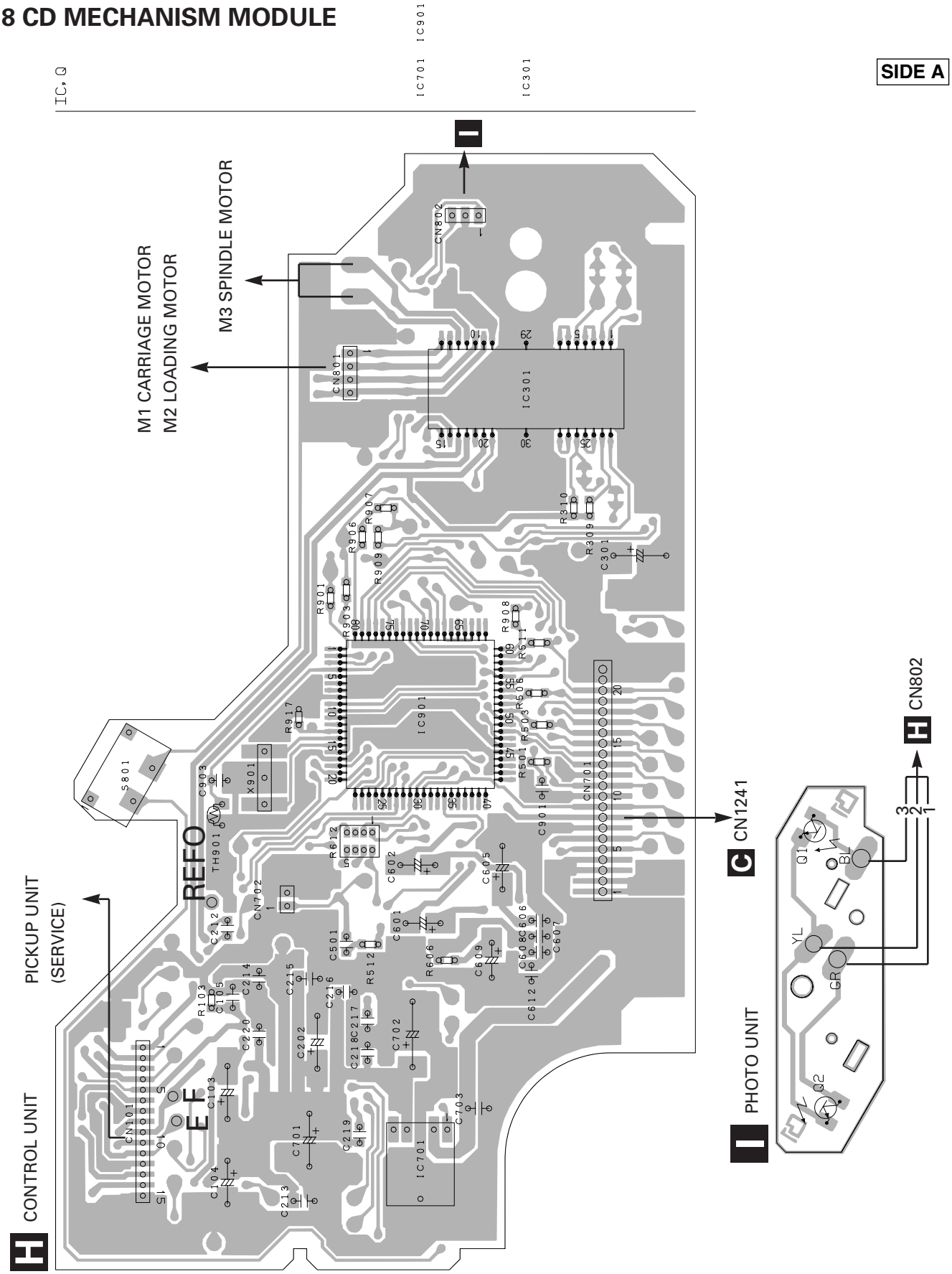
IC3101
IC3301
IC3103

SIDE B

G DSP UNIT

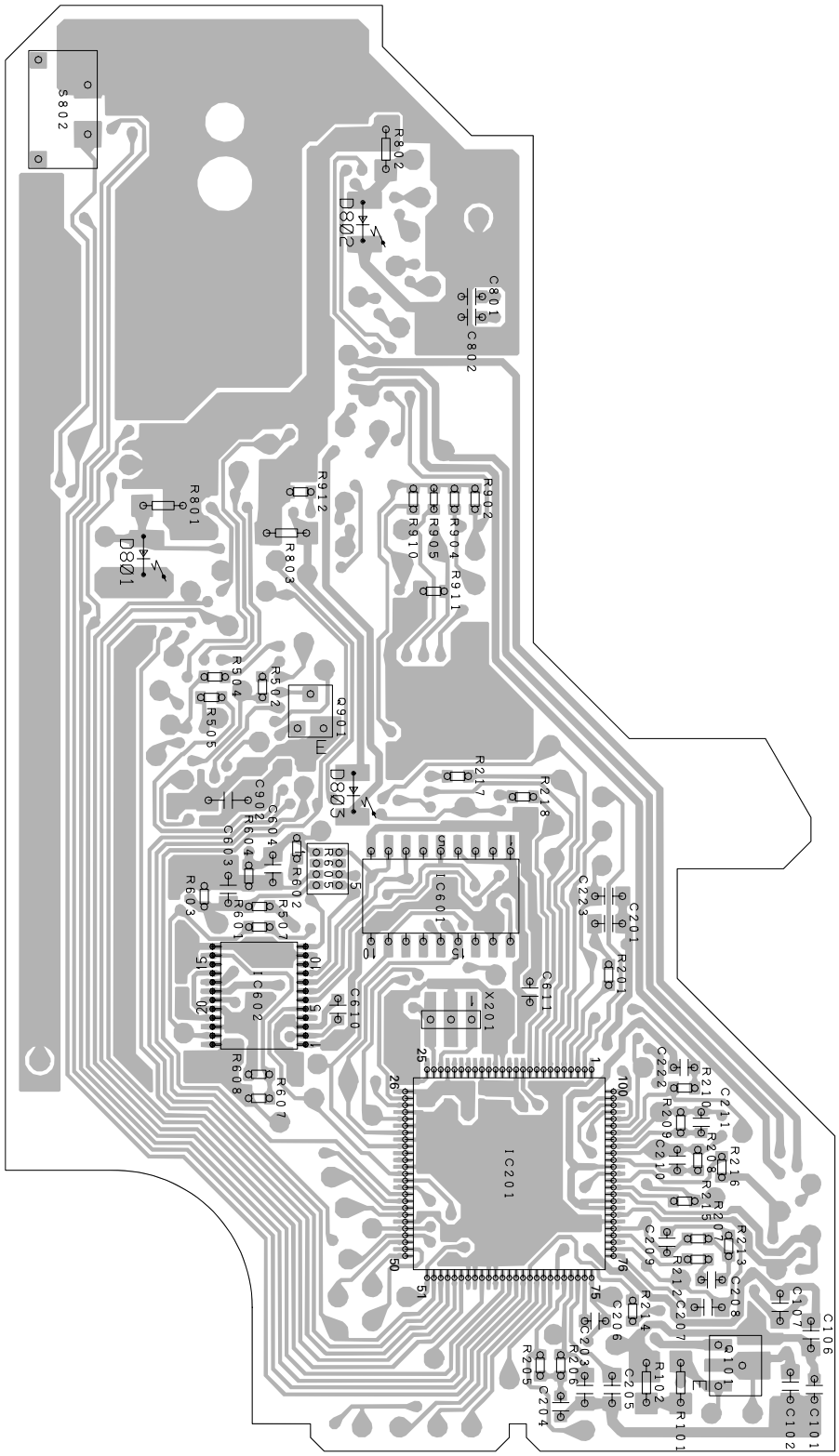


4.8 CD MECHANISM MODULE



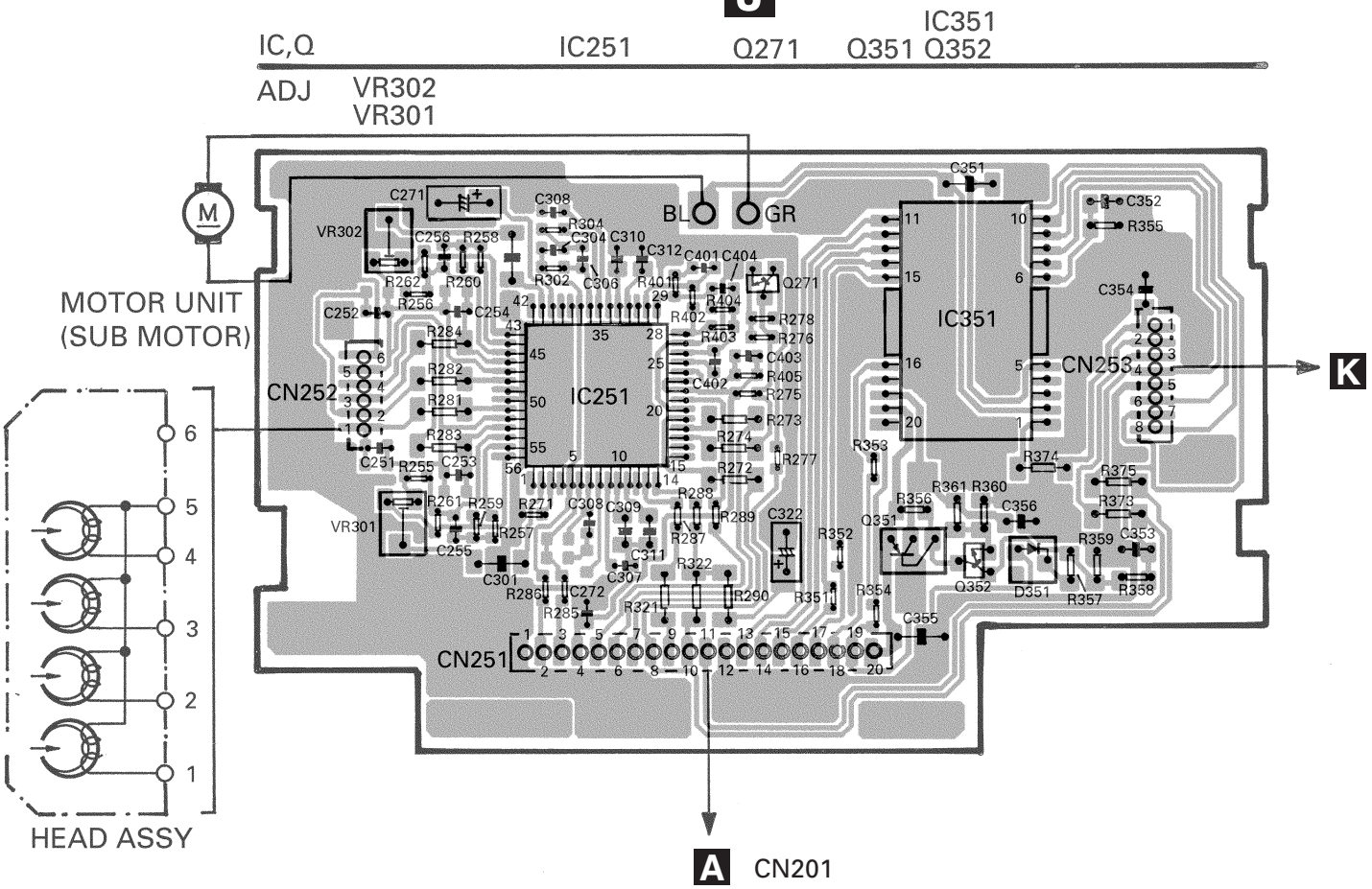
SIDE B

CONTROL UNIT

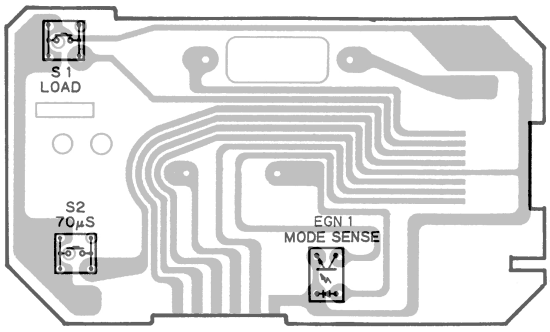


4.9 CASSETTE MECHANISM MODULE

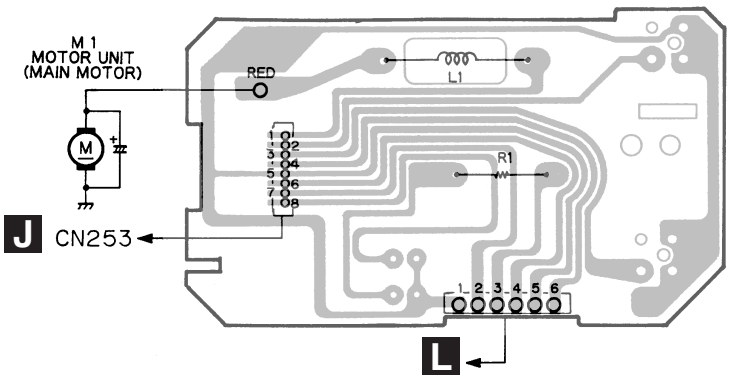
J DECK UNIT



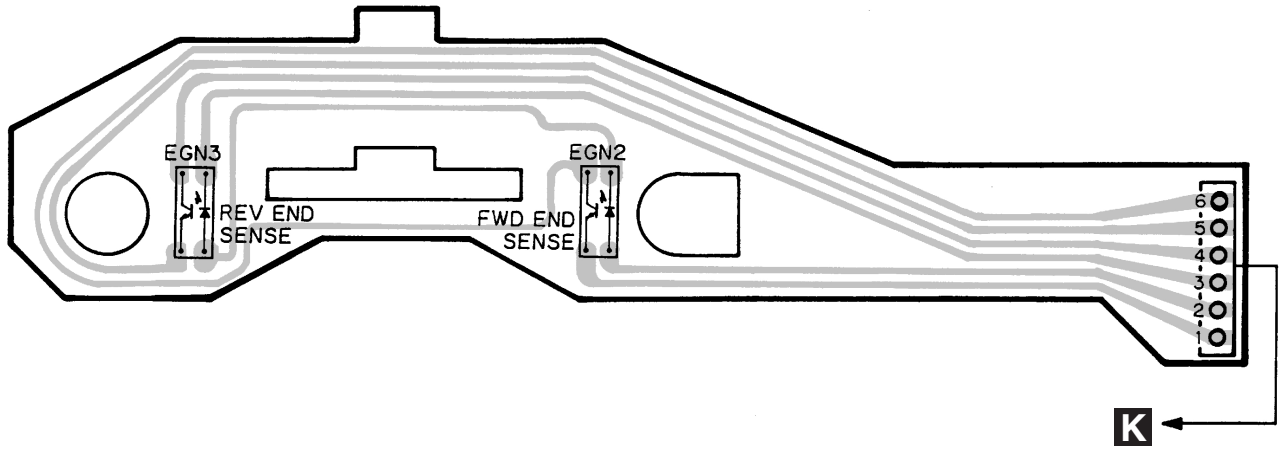
K PCB UNIT **SIDE A**



K PCB UNIT **SIDE B**



L REEL PCB



5. ELECTRICAL PARTS LIST

NOTES:

● Parts whose parts numbers are omitted are subject to being not supplied.

● The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

B Unit Number: CWE1501
Unit Name : FM/AM Tuner Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	1	IC	PML002A
IC	2	IC	PM4008A
IC	3	IC	BR9010FV
Q	1	Transistor	2SC4081
Q	2	Transistor	DTC124EU
Q	3	FET	3SK263
Q	51	Transistor	2SC4081
Q	201	FET	2SK932
Q	202	Transistor	DTC124EU
Q	204	Transistor	2SC4081
D	1	Diode	KV1410(23)
D	2	Diode	1SV248
D	6	Diode	KV1410(23)
D	201	Diode	DAN217U
D	202	Diode	MA147
D	903	Diode	KV1410(23)
D	904	Diode	SVC253
L	1	Coil	CTC1155
L	3	Inductor	LCTB1R5K2125
L	4	Coil	CTC1155
L	201	Inductor	LCTB330K1608
L	202	Inductor	LFEA102J
L	203	Inductor	LCTA121J3225
L	901	Coil	CTC1154
L	902	Inductor	LCTA3R3J3225
L	904	Inductor	LCTBR47K1608
L	905	Inductor	LCTBR47K1608
T	51	Coil	CTE1132
CF	51	Ceramic Filter	CTF1442
CF	52	Ceramic Filter	CTF1442
CF	53	Ceramic Filter	CTF1442
CF	202	Ceramic Filter	CTF1476
X	901	Crystal Resonator 10.250MHz	CSS1432

RESISTORS

=====Circuit Symbol and No.		===Part Name	Part No.
R	1		RS1/16S183J
R	2		RS1/16S103J
R	5		RS1/16S0R0J
R	7		RS1/16S273J
R	8		RS1/16S473J
R	9		RS1/16S223J
R	10		RS1/16S473J
R	11		RS1/16S221J
R	12		RS1/16S103J
R	13		RS1/16S104J
R	16		RS1/16S223J
R	17		RS1/16S221J
R	18		RS1/16S221J
R	19		RS1/16S473J
R	20		RS1/16S470J
R	31		RS1/16S0R0J
R	51		RS1/16S470J
R	52		RS1/16S103J
R	53		RS1/16S103J
R	54		RS1/16S331J
R	55		RS1/16S331J
R	56		RS1/16S560J
R	57		RS1/16S560J
R	58		RS1/16S102J
R	59		RS1/16S225J
R	60		RS1/16S133J
R	61		RS1/16S433J
R	101		RS1/16S333J
R	102		RS1/16S103J
R	103		RS1/16S333J
R	104		RS1/16S562J
R	106		RS1/16S0R0J
R	108		RS1/16S0R0J
R	110		RS1/16S154J
R	111		RS1/16S273J
R	113		RS1/16S222J
R	114		RS1/16S333J
R	115		RS1/16S334J
R	116		RS1/16S473J
R	202		RS1/16S472J
R	203		RS1/16S225J
R	204		RS1/16S102J
R	205		RS1/16S220J
R	206		RS1/16S471J
R	208		RS1/16S104J
R	209		RS1/16S104J
R	210		RS1/16S563J
R	213		RS1/16S223J
R	251		RS1/16S225J
R	902		RS1/16S103J
R	904		RS1/16S473J
R	907		RS1/16S103J
R	908		RS1/16S681J
R	909		RS1/16S473J
R	914		RS1/16S562J

CAPACITORS

=====Circuit Symbol and No.		===Part Name	Part No.
C	1		CCSQCH4R0C50
C	6		CKSQYB105K10
C	8		CKSRYB222K50
C	10		CCSRCH220J50
C	11		CCSRCH150J50
C	12		CCSRCH8R0D50
C	14		CCSRCJ3R0C50
C	15		CKSRYB103K50
C	16		CKSRYB222K50
C	17		CKSRYB222K50

=====Circuit Symbol and No.	Part Name	Part No.
C 18		CCSRCJ3R0C50
C 19		CKSRYB103K50
C 20		CKSRYB103K50
C 21		CKSRYB103K50
C 24		CKSQYB334K16
C 26		CKSRYB472K50
C 30		CCSRCH220J50
C 32		CCSRCH470J50
C 35		CKSRYB103K50
C 51		CKSRYB103K50
C 52		CKSRYB473K16
C 53		CCSRCK2R0C50
C 54		CKSRYB103K50
C 55		CKSRYB104K16
C 56		CKSRYB104K16
C 58		CKSQYB224K16
C 101		CEALNP100M10
C 102		CCSRCH151J50
C 103		CKSRYB473K16
C 105		CKSRYB682K25
C 106		CEALR68M50
C 107		CKSRYB103K50
C 108		CKSQYB474K16
C 109		CKSQYB474K16
C 110		CKSRYB104K16
C 111		CKSRYB104K16
C 112		CKSRYB104K16
C 113		CKSRYB123K25
C 114		CEAL220M6R3
C 115		CKSRYB473K16
C 116		CEAL2R2M50
C 117		CKSRYB102K50
C 120		CKSRYB183K25
C 121		CKSRYB332K50
C 122		CKSRYB562K25
C 123		CKSRYB681K50
C 125		CKSRYB103K50
C 126		CKSRYB103K50
C 127		CEAL2R2M50
C 128		CKSRYB103K50
C 201		CCSRCH471J50
C 202		CCSRCH100D50
C 203		CKSRYB104K16
C 204		CKSRYB332K50
C 205		CKSRYB103K50
C 206		CKSRYB104K16
C 207		CKSRYB473K16
C 208		CCSRCH560J50
C 209		CEAL470M6R3
C 210		CKSRYB103K50
C 211		CKSRYB103K50
C 212		CCSRCH101J50
C 215		CKSRYB223K25
C 216		CKSQYB334K16
C 217		CKSRYB103K50
C 219		CKSQYB105K10
C 220		CKSRYB104K16
C 221		CKSRYB473K16
C 222		CKSQYB334K16
C 223		CKSQYB474K16
C 224		CKSRYB104K16
C 225		CKSRYB272K50
C 226		CKSRYB682K25
C 902		CCSRCH270J50
C 904		CKSRYB223K25

=====Circuit Symbol and No.	Part Name	Part No.
C 905		CKSRYB103K50
C 906		CCSRTH100D50
C 907		CCSRTH150J50
C 909		CCSRTH100D50
C 910		CKSRYB332K50
C 912		CKSQYB474K16
C 913		CKSRYB223K25
C 914		CKSRYB682K25
C 915		CKSQYB223K25
C 916		CKSQYB474K16
C 917		CKSYB475K10
C 918		CKSRYB223K25
C 919		CKSQYB225K10
C 920		CCSRCH270J50
C 921		CCSRCH270J50
C 922		CKSYB105K16
C 923		CKSRYB103K50

A Unit Number: CWM6733(FH-P8800/UC)
Unit Name : Audio Amp Unit

MISCELLANEOUS

IC	101	IC	BA3131FS
IC	102	IC	BA3131FS
IC	103	IC	NJM4558MD
IC	104	IC	NJM4558MD
IC	351	IC	PAL005A
IC	402	IC	S-81250SGUP
IC	601	IC	PE5028A
IC	603	IC	S-80734ANDYI
IC	851	IC	BA6288FS
IC	852	IC	TC7W14FU
IC	853	Photo-interrupter	GP1S94J
IC	855	Photo-interrupter	GP1S94J
IC	1901	IC	NJM7805FA
IC	1902	IC	TPD1018F
Q	301	Transistor	DTA124EU
Q	302	Transistor	DTA124EU
Q	303	Transistor	IMD2A
Q	304	Transistor	DTC124EU
Q	305	Transistor	2SC4116
Q	306	Transistor	DTC114TU
Q	307	Transistor	IMD2A
Q	308	Transistor	DTC144EU
Q	309	Transistor	DTC144EU
Q	310	Transistor	IMD2A
Q	351	Transistor	FMG13
Q	352	Transistor	FMG13
Q	353	Transistor	FMG13
Q	354	Transistor	FMG13
Q	355	Transistor	FMG13
Q	356	Transistor	FMG13
Q	401	Transistor	2SC4116
Q	601	Transistor	DTA114EU
Q	602	Transistor	DTC124EK
Q	801	Transistor	2SA1036K
Q	802	Transistor	2SA1162
Q	803	Transistor	DTC124EU
Q	804	Transistor	2SA1036K
Q	805	Transistor	DTC124EU
Q	806	Transistor	2SD2396
Q	807	Transistor	DTC124EK
Q	808	Transistor	IMD3A
Q	851	Transistor	2SD1760F5
Q	852	Transistor	IMD2A
Q	854	Transistor	2SD1859
Q	855	Transistor	IMD3A

Circuit Symbol and No.	Part Name	Part No.
Q 1901	Transistor	2SB1243
Q 1902	Transistor	DTC123EK
Q 1903	Transistor	2SC2412K
Q 1904	Transistor	2SA1586
Q 1905	Transistor	DTC114EK
Q 1906	Transistor	2SC2412K
D 301	Diode	DAN202U
D 302	Diode	DAN202U
D 303	Diode	DAN202U
D 304	Diode	MA8075(H)
D 305	Diode	DAN202U
D 306	Diode	DAN202U
D 351	Diode	ERA15-02VH
D 352	Diode	ERA15-02VH
D 404	Diode	MA719
D 405	Diode	HZS16(1)
D 601	Diode	MA110
D 751	Diode	MA110
D 801	Diode	HZS9L(B2)
D 802	Diode	MA8056(M)
D 803	Diode	MA8039(L)
D 851	Diode	MA110
D 852	Diode	MA110
D 853	Diode	HZS7L(C2)
D 854	Diode	UDZ13(B)
D 1901	Diode	MA8082(L)
D 1902	Diode	DAN202U
D 1903	Diode	ERA15-02VH
D 1904	Diode	ERA15-02VH
D 1906	Diode	ERA15-02VH
D 1907	Diode	ERA15-02VH
D 1908	Diode	MA110
D 1909	Diode	MA8062(H)
L 403	Inductor	LCTB4R7K2125
L 411	Inductor	CTF1420
L 412	Inductor	CTF1420
L 601	Inductor	CTF1420
L 610	Inductor	CTF1399
L 611	Inductor	CTF1410
L 612	Inductor	CTF1410
L 701	Inductor	CTF1410
L 751	Inductor	CTF1420
L 752	Inductor	CTF1420
L 754	Inductor	CTF1410
L 801	Inductor	CTF1399
L 1901	Inductor	LCTB2R2K2125
X 601	Radiator 12.58291MHz	CSS1402
S 851	Spring Switch	CSN1046
S 853	Spring Switch	CSN1046
FU 701	Micro-Fuse 2A	CEK1190
FU 801	Micro-Fuse 1A	CEK1191
FU 802	Micro-Fuse 400mA	CEK1184
FU 803	Micro-Fuse 200mA	CEK1189
FU 851	Micro-Fuse 400mA	CEK1184
	DSP Unit	CWM6755
	FM/AM Tuner Unit	CWE1501
BZ 601	Buzzer	CPV1012
AR 401		DSPS-201M

RESISTORS

Circuit Symbol and No.	Part Name	Part No.
R 101		RS1/16S102J
R 102		RS1/16S102J
R 103		RS1/16S473J
R 104		RS1/16S473J
R 105		RS1/16S183J
R 106		RS1/16S183J
R 107		RS1/16S113J
R 108		RS1/16S113J
R 109		RS1/16S102J
R 110		RS1/16S102J
R 111		RS1/16S473J
R 112		RS1/16S473J
R 113		RS1/16S333J
R 114		RS1/16S333J
R 115		RS1/16S133J
R 116		RS1/16S133J
R 117		RS1/16S102J
R 118		RS1/16S102J
R 119		RS1/16S104J
R 120		RS1/16S104J
R 121		RS1/16S123J
R 122		RS1/16S123J
R 123		RS1/16S474J
R 124		RS1/16S474J
R 127		RS1/16S102J
R 128		RS1/16S102J
R 129		RS1/16S473J
R 130		RS1/16S473J
R 133		RS1/16S0R0J
R 134		RS1/16S0R0J
R 135		RS1/16S102J
R 136		RS1/16S102J
R 137		RS1/16S473J
R 138		RS1/16S473J
R 139		RS1/16S113J
R 140		RS1/16S113J
R 141		RS1/16S114J
R 142		RS1/16S114J
R 143		RS1/16S102J
R 144		RS1/16S102J
R 145		RS1/16S104J
R 146		RS1/16S104J
R 147		RS1/16S183J
R 148		RS1/16S183J
R 149		RS1/16S113J
R 150		RS1/16S113J
R 153		RS1/16S102J
R 154		RS1/16S102J
R 155		RS1/16S103J
R 156		RS1/16S103J
R 157		RS1/16S103J
R 158		RS1/16S103J
R 159		RS1/16S203J
R 160		RS1/16S203J
R 161		RS1/16S133J
R 162		RS1/16S133J
R 163		RS1/16S153J
R 164		RS1/16S153J
R 165		RS1/16S102J
R 166		RS1/16S102J
R 167		RS1/16S472J
R 168		RS1/16S472J
R 169		RS1/16S472J
R 170		RS1/16S472J
R 171		RS1/16S472J
R 172		RS1/16S472J
R 173		RS1/16S331J
R 174		RS1/16S331J
R 175		RS1/16S331J
R 176		RS1/16S331J
R 177		RS1/16S103J
R 178		RS1/16S103J
R 179		RS1/16S103J
R 180		RS1/16S103J
R 181		RS1/16S103J
R 182		RS1/16S103J
R 183		RS1/16S271J
R 184		RS1/16S271J
R 185		RS1/16S223J
R 186		RS1/16S223J

=====Circuit Symbol and No.	Part Name	Part No.
R 187		RS1/16S102J
R 188		RS1/16S102J
R 201		RA3C473J
R 202		RA3C473J
R 203		RA4C222J
R 204		RA4C222J
R 205		RA4C222J
R 206		RS1/16S681J
R 302		RS1/16S222J
R 303		RS1/16S222J
R 304		RS1/16S473J
R 305		RS1/16S473J
R 306		RS1/16S103J
R 307		RS1/16S103J
R 308		RS1/16S331J
R 310		RS1/16S0R0J
R 311		RS1/10S103J
R 351		RS1/16S391J
R 352		RS1/16S391J
R 353		RS1/16S391J
R 354		RS1/16S391J
R 355		RS1/16S223J
R 356		RS1/16S223J
R 359		RS1/16S391J
R 360		RS1/16S391J
R 361		RS1/16S391J
R 362		RS1/16S391J
R 363		RS1/16S223J
R 364		RS1/16S223J
R 367		RS1/16S391J
R 368		RS1/16S391J
R 369		RS1/16S391J
R 370		RS1/16S391J
R 371		RS1/16S223J
R 372		RS1/16S223J
R 401		RS1/10S681J
R 402		RS1/10S473J
R 403		RS1/10S681J
R 404		RS1/10S473J
R 405		RS1/16S272J
R 406		RS1/16S272J
R 407		RS1/16S162J
R 408		RS1/16S162J
R 409		RS1/16S473J
R 410		RS1/16S472J
R 411		RS1/16S473J
R 412		RA3C681J
R 413		RS1/10S103J
R 417		RS1/10S393J
R 418		RS1/16S473J
R 419		RS1/10S473J
R 420		RS1/10S222J
R 421		RS1/10S222J
R 437		RS1/10S0R0J
R 438		RS1/8S181J
R 439		RS1/16S681J
R 440		RS1/16S0R0J
R 601		RS1/16S102J
R 602		RS1/16S473J
R 603		RS1/16S102J
R 604		RS1/16S473J
R 605		RS1/16S472J
R 606		RA3C473J
R 609		RS1/16S473J
R 613		RA4C221J
R 614		RS1/16S221J
R 615		RS1/16S473J
R 616		RA4C473J
R 617		RS1/16S102J
R 618		RS1/16S124J

=====Circuit Symbol and No.	Part Name	Part No.
R 619		RS1/16S123J
R 620		RS1/10S202J
R 621		RS1/10S152J
R 622		RS1/16S473J
R 624		RS1/16S221J
R 625		RS1/16S473J
R 626		RS1/16S473J
R 627		RS1/16S102J
R 628		RS1/16S473J
R 629		RS1/16S473J
R 630		RS1/16S102J
R 631		RS1/16S102J
R 633		RS1/16S473J
R 634		RS1/16S103J
R 635		RS1/16S103J
R 636		RS1/16S0R0J
R 637		RS1/16S0R0J
R 751		RS1/16S221J
R 752		RS1/16S221J
R 753		RA3C221J
R 801		RS1/10S152J
R 802		RS1/10S223J
R 803		RS1/10S223J
R 804		RS1/10S472J
R 805		RS1/10S223J
R 806		RS1/10S332J
R 807		RS1/2PMF391J
R 812		RS1/16S102J
R 814		RS1/16S561J
R 816		RS1/16S222J
R 822		RS1/16S102J
R 823		RS1/16S471J
R 824		RS1/16S102J
R 825		RS1/16S471J
R 854		RS1/16S102J
R 855		RS1/16S102J
R 857		RS1/10S221J
R 860		RS1/16S473J
R 861		RS1/16S221J
R 862		RS1/16S473J
R 863		RS1/16S221J
R 864		RD1/4PU271J
R 1901		RS1/10S473J
R 1902		RS1/10S102J
R 1903		RD1/4PU102J
R 1904		RS1/10S223J
R 1905		RS1/10S473J
R 1906		RS1/16S102J
R 1907		RS1/16S472J
R 1908		RS1/16S472J
R 1909		RS1/16S183J
R 1910		RS1/10S102J
R 1911		RS1/10S103J
R 1912		RS1/10S223J
R 1913		RS1/10S473J
R 1914		RS1/10S472J

CAPACITORS

C 101		CCSRCH151J50
C 102		CCSRCH151J50
C 103		CCSRCH151J50
C 104		CCSRCH151J50
C 105		CCSRCH100D50
C 106		CCSRCH100D50
C 107		CEJA100M16
C 108		CEJA101M10
C 109		CEJA101M10
C 111		CEJANP4R7M16

=====Circuit Symbol and No.		===Part Name	Part No.
C	112		CEJANP4R7M16
C	115		CCSRCH220J50
C	116		CCSRCH220J50
C	117		CCSRCH151J50
C	118		CCSRCH151J50
C	119		CEJA100M16
C	120		CEJA101M10
C	121		CEJA101M10
C	123		CEV100M16
C	124		CEV100M16
C	125		CEVNP2R2M35
C	126		CEVNP2R2M35
C	127		CEV2R2M50
C	128		CEV2R2M50
C	129		CKSRYB331K50
C	130		CKSRYB331K50
C	131		CKSRYB331K50
C	132		CKSRYB331K50
C	133		CEJA4R7M35
C	134		CEV4R7M25
C	135		CKSRYB103K50
C	136		CKSRYB103K50
C	137		CEV100M16
C	138		CEV100M16
C	139		CEV100M16
C	140		CEV100M16
C	141		CEWAR101M10
C	142		CEWAR101M10
C	201		CKSRYB103K50
C	202		CEJA101M16
C	203		CEWAS100M16
C	204		CEWAS100M16
C	205		CEJA100M16
C	301		CEJA330M10
C	351		CKSYB474K16
C	352		CKSYB474K16
C	353		CKSYB474K16
C	354		CKSYB474K16
C	355	4700µF/16V	CCH1302
C	356		CKSYB104K50
C	357		CEJA1R0M50
C	358		CKSYB225K16
C	359		CEJA100M16
C	360		CKSYB473K50
C	361		CEWAR100M16
C	362		CEWAR100M16
C	363		CKSRYB102K50
C	364		CKSRYB102K50
C	367		CEWAR100M16
C	368		CEWAR100M16
C	369		CKSRYB102K50
C	370		CKSRYB102K50
C	371		CKSQYB474K16
C	372		CKSQYB474K16
C	373		CEWAR100M16
C	374		CEWAR100M16
C	375		CKSRYB102K50
C	376		CKSRYB102K50
C	377		CKSQYB474K16
C	378		CKSQYB474K16
C	379		CKSYB225K16
C	401		CKSRYB183K25
C	402		CKSRYB183K25
C	403		CCSQCH101J50
C	404		CEJA101M10
C	405		CKSQYB472K50
C	408		CCSQCH101J50
C	409		CCSQCH101J50
C	410		CKSQYB103K50
C	429		CEJA4R7M35

=====Circuit Symbol and No.		===Part Name	Part No.
C	430		CEJA4R7M35
C	432		CKSQYB103K50
C	433	470µF/16V	CCH1183
C	434		CKSQYB225K10
C	435		CKSQYB473K25
C	436		CKSQYB473K25
C	438		CCSQCH101J50
C	439		CKSRYB103K50
C	606		CKSRYB104K16
C	607		CCSRCH200J50
C	608		CCSRCH200J50
C	611		CKSQYB103K50
C	616		CEJA2R2M50
C	618		CKSQYB103K50
C	624		CKSYB102K50
C	626		CKSRYB103K50
C	751		CCSRCH220J50
C	752		CCSRCH220J50
C	753		CCSRCH220J50
C	754		CCSRCH220J50
C	755		CCSRCH220J50
C	756		CKSQYB105K10
C	757		CCSQCH101J50
C	758		CCSQCH101J50
C	759		CKSQYB105K10
C	760		CCSRCH101J50
C	801		CKSQYB103K50
C	802		CKSRYB103K50
C	803		CEJA100M16
C	804		CKSQYB103K50
C	806		CKSRYB221K50
C	807		CKSRYB221K50
C	808		CEJA100M16
C	809		CEJA101M10
C	811		CEVNP4R7M16
C	812		CKSQYB103K50
C	854		CKSQYB103K50
C	855		CKSQYB103K50
C	856		CKSQYB102K50
C	857		CCSQCH101K50
C	858		CEJA470M10
C	859		CKSQYB103K50
C	860		CEJA100M16
C	861		CKSQYB103K50
C	862		CKSQYB103K50
C	1901		CKSRYB103K50
C	1902		CEJA470M6R3
C	1903	470µF/16V	CCH1183
C	1904		CKSYB225K16
C	1905		CKSQYB473K50
C	1906		CKSQYB473K50
C	1907		CKSRYB473K16
C	1908		CEJA1R0M50
C	1909		CKSYB104K50

A Unit Number: CWM6734(FH-P8800/ES)
Unit Name : Audio Amp Unit

MISCELLANEOUS

IC	101	IC	BA3131FS
IC	102	IC	BA3131FS
IC	103	IC	NJM4558MD
IC	104	IC	NJM4558MD
IC	351	IC	PAL005A
IC	402	IC	S-81250SGUP
IC	601	IC	PE5028A
IC	603	IC	S-80734ANDYI
IC	851	IC	BA6288FS
IC	852	IC	TC7W14FU

Circuit Symbol and No.		Part Name	Part No.
IC	853	Photo-interrupter	GP1S94J
IC	855	Photo-interrupter	GP1S94J
IC	1901	IC	NJM7805FA
IC	1902	IC	TPD1018F
Q	301	Transistor	DTA124EU
Q	302	Transistor	DTA124EU
Q	303	Transistor	IMD2A
Q	304	Transistor	DTC124EU
Q	305	Transistor	2SC4116
Q	306	Transistor	DTC114TU
Q	307	Transistor	IMD2A
Q	308	Transistor	DTC144EU
Q	309	Transistor	DTC144EU
Q	310	Transistor	IMD2A
Q	351	Transistor	FMG13
Q	352	Transistor	FMG13
Q	353	Transistor	FMG13
Q	354	Transistor	FMG13
Q	401	Transistor	2SC4116
Q	601	Transistor	DTA114EU
Q	602	Transistor	DTC124EK
Q	801	Transistor	2SA1036K
Q	802	Transistor	2SA1162
Q	803	Transistor	DTC124EU
Q	804	Transistor	2SA1036K
Q	805	Transistor	DTC124EU
Q	806	Transistor	2SD2396
Q	807	Transistor	DTC124EK
Q	808	Transistor	IMD3A
Q	851	Transistor	2SD1760F5
Q	852	Transistor	IMD2A
Q	854	Transistor	2SD1859
Q	855	Transistor	IMD3A
Q	1901	Transistor	2SB1243
Q	1902	Transistor	DTC123EK
Q	1903	Transistor	2SC2412K
Q	1904	Transistor	2SA1586
Q	1905	Transistor	DTC114EK
Q	1906	Transistor	2SC2412K
D	301	Diode	DAN202U
D	302	Diode	DAN202U
D	303	Diode	DAN202U
D	304	Diode	MA8075(H)
D	305	Diode	DAN202U
D	306	Diode	DAN202U
D	351	Diode	ERA15-02VH
D	352	Diode	ERA15-02VH
D	404	Diode	MA719
D	405	Diode	HZS16(1)
D	601	Diode	MA110
D	751	Diode	MA110
D	801	Diode	HZS9L(B2)
D	802	Diode	MA8056(M)
D	803	Diode	MA8039(L)
D	851	Diode	MA110
D	852	Diode	MA110
D	853	Diode	HZS7L(C2)
D	854	Diode	UDZ13(B)
D	1901	Diode	MA8082(L)
D	1902	Diode	DAN202U
D	1903	Diode	ERA15-02VH
D	1904	Diode	ERA15-02VH
D	1906	Diode	ERA15-02VH
D	1907	Diode	ERA15-02VH
D	1908	Diode	MA110
D	1909	Diode	MA8062(H)
L	403	Inductor	LCTB4R7K2125
L	411	Inductor	CTF1420
L	412	Inductor	CTF1420
L	601	Inductor	CTF1420

Circuit Symbol and No.		Part Name	Part No.
L	610	Inductor	CTF1399
L	611	Inductor	CTF1410
L	612	Inductor	CTF1410
L	701	Inductor	CTF1410
L	751	Inductor	CTF1420
L	752	Inductor	CTF1420
L	754	Inductor	CTF1410
L	801	Inductor	CTF1399
L	1901	Inductor	LCTB2R2K2125
X	601	Radiator 12.58291MHz	CSS1402
S	851	Spring Switch	CSN1046
S	853	Spring Switch	CSN1046
FU	701	Micro-Fuse 2A	CEK1190
FU	801	Micro-Fuse 1A	CEK1191
FU	802	Micro-Fuse 400mA	CEK1184
FU	803	Micro-Fuse 200mA	CEK1189
FU	851	Micro-Fuse 400mA	CEK1184
		DSP Unit	CWM6755
		FM/AM Tuner Unit	CWE1501
BZ	601	Buzzer	CPV1012
AR	401		DSPS-201M-S00B

RESISTORS

R	101		RS1/16S102J
R	102		RS1/16S102J
R	103		RS1/16S473J
R	104		RS1/16S473J
R	105		RS1/16S183J
R	106		RS1/16S183J
R	107		RS1/16S113J
R	108		RS1/16S113J
R	109		RS1/16S102J
R	110		RS1/16S102J
R	111		RS1/16S473J
R	112		RS1/16S473J
R	113		RS1/16S333J
R	114		RS1/16S333J
R	115		RS1/16S133J
R	116		RS1/16S133J
R	117		RS1/16S102J
R	118		RS1/16S102J
R	119		RS1/16S104J
R	120		RS1/16S104J
R	121		RS1/16S123J
R	122		RS1/16S123J
R	123		RS1/16S474J
R	124		RS1/16S474J
R	127		RS1/16S102J
R	128		RS1/16S102J
R	129		RS1/16S473J
R	130		RS1/16S473J
R	133		RS1/16S0R0J
R	134		RS1/16S0R0J
R	135		RS1/16S102J
R	136		RS1/16S102J
R	137		RS1/16S473J
R	138		RS1/16S473J
R	139		RS1/16S113J
R	140		RS1/16S113J
R	141		RS1/16S114J
R	142		RS1/16S114J
R	143		RS1/16S102J
R	144		RS1/16S102J
R	145		RS1/16S104J
R	146		RS1/16S104J
R	147		RS1/16S183J
R	148		RS1/16S183J
R	149		RS1/16S113J

=====Circuit Symbol and No.	Part Name	Part No.
R 150		RS1/16S113J
R 153		RS1/16S102J
R 154		RS1/16S102J
R 155		RS1/16S103J
R 156		RS1/16S103J
R 157		RS1/16S103J
R 158		RS1/16S103J
R 159		RS1/16S203J
R 160		RS1/16S203J
R 161		RS1/16S133J
R 162		RS1/16S133J
R 163		RS1/16S153J
R 164		RS1/16S153J
R 165		RS1/16S102J
R 166		RS1/16S102J
R 167		RS1/16S472J
R 168		RS1/16S472J
R 169		RS1/16S472J
R 170		RS1/16S472J
R 171		RS1/16S472J
R 172		RS1/16S472J
R 173		RS1/16S331J
R 174		RS1/16S331J
R 175		RS1/16S331J
R 176		RS1/16S331J
R 177		RS1/16S103J
R 178		RS1/16S103J
R 179		RS1/16S103J
R 180		RS1/16S103J
R 181		RS1/16S103J
R 182		RS1/16S103J
R 183		RS1/16S271J
R 184		RS1/16S271J
R 185		RS1/16S223J
R 186		RS1/16S223J
R 187		RS1/16S102J
R 188		RS1/16S102J
R 201		RA3C473J
R 202		RA3C473J
R 203		RA4C222J
R 204		RA4C222J
R 205		RA4C222J
R 206		RS1/16S681J
R 302		RS1/16S222J
R 303		RS1/16S222J
R 304		RS1/16S473J
R 305		RS1/16S473J
R 306		RS1/16S103J
R 307		RS1/16S103J
R 308		RS1/16S331J
R 310		RS1/16S0R0J
R 311		RS1/10S103J
R 351		RS1/16S391J
R 352		RS1/16S391J
R 353		RS1/16S391J
R 354		RS1/16S391J
R 355		RS1/16S223J
R 356		RS1/16S223J
R 359		RS1/16S391J
R 360		RS1/16S391J
R 361		RS1/16S391J
R 362		RS1/16S391J
R 363		RS1/16S223J
R 364		RS1/16S223J
R 401		RS1/10S681J
R 402		RS1/10S473J
R 403		RS1/10S681J
R 404		RS1/10S473J
R 405		RS1/16S272J
R 406		RS1/16S272J

=====Circuit Symbol and No.	Part Name	Part No.
R 407		RS1/16S162J
R 408		RS1/16S162J
R 409		RS1/16S473J
R 410		RS1/16S472J
R 411		RS1/16S473J
R 412		RA3C681J
R 413		RS1/10S103J
R 417		RS1/10S393J
R 418		RS1/16S473J
R 419		RS1/10S473J
R 420		RS1/10S222J
R 421		RS1/10S222J
R 437		RS1/10S0R0J
R 438		RS1/8S181J
R 439		RS1/16S681J
R 440		RS1/16S0R0J
R 601		RS1/16S102J
R 602		RS1/16S473J
R 603		RS1/16S102J
R 604		RS1/16S473J
R 605		RS1/16S472J
R 606		RA3C473J
R 609		RS1/16S473J
R 613		RA4C221J
R 614		RS1/16S221J
R 615		RS1/16S473J
R 616		RA4C473J
R 617		RS1/16S102J
R 618		RS1/16S124J
R 619		RS1/16S123J
R 620		RS1/10S202J
R 621		RS1/10S152J
R 622		RS1/16S473J
R 624		RS1/16S221J
R 625		RS1/16S473J
R 626		RS1/16S473J
R 627		RS1/16S102J
R 628		RS1/16S473J
R 629		RS1/16S473J
R 630		RS1/16S102J
R 631		RS1/16S102J
R 632		RS1/16S473J
R 633		RS1/16S473J
R 634		RS1/16S103J
R 635		RS1/16S103J
R 636		RS1/16S0R0J
R 637		RS1/16S0R0J
R 751		RS1/16S221J
R 752		RS1/16S221J
R 753		RA3C221J
R 801		RS1/10S152J
R 802		RS1/10S223J
R 803		RS1/10S223J
R 804		RS1/10S472J
R 805		RS1/10S223J
R 806		RS1/10S332J
R 807		RS1/2PMF391J
R 812		RS1/16S102J
R 814		RS1/16S561J
R 816		RS1/16S222J
R 822		RS1/16S102J
R 823		RS1/16S471J
R 824		RS1/16S102J
R 825		RS1/16S471J
R 854		RS1/16S102J
R 855		RS1/16S102J
R 857		RS1/10S221J
R 860		RS1/16S473J
R 861		RS1/16S221J
R 862		RS1/16S473J

=====Circuit Symbol and No.		===Part Name	Part No.
R	863		RS1/16S221J
R	864		RD1/4PU271J
R	1901		RS1/10S473J
R	1902		RS1/10S102J
R	1903		RD1/4PU102J
R	1904		RS1/10S223J
R	1905		RS1/10S473J
R	1906		RS1/16S102J
R	1907		RS1/16S472J
R	1908		RS1/16S472J
R	1909		RS1/16S183J
R	1910		RS1/10S102J
R	1911		RS1/10S103J
R	1912		RS1/10S223J
R	1913		RS1/10S473J
R	1914		RS1/10S472J

CAPACITORS

C	101		CCSRCH151J50
C	102		CCSRCH151J50
C	103		CCSRCH151J50
C	104		CCSRCH151J50
C	105		CCSRCH100D50
C	106		CCSRCH100D50
C	107		CEJA100M16
C	108		CEJA101M10
C	109		CEJA101M10
C	111		CEJANP4R7M16
C	112		CEJANP4R7M16
C	115		CCSRCH220J50
C	116		CCSRCH220J50
C	117		CCSRCH151J50
C	118		CCSRCH151J50
C	119		CEJA100M16
C	120		CEJA101M10
C	121		CEJA101M10
C	123		CEV100M16
C	124		CEV100M16
C	125		CEVNP2R2M35
C	126		CEVNP2R2M35
C	127		CEV2R2M50
C	128		CEV2R2M50
C	129		CKSRYB331K50
C	130		CKSRYB331K50
C	131		CKSRYB331K50
C	132		CKSRYB331K50
C	133		CEJA4R7M35
C	134		CEV4R7M25
C	135		CKSRYB103K50
C	136		CKSRYB103K50
C	137		CEV100M16
C	138		CEV100M16
C	139		CEV100M16
C	140		CEV100M16
C	141		CEWAR101M10
C	142		CEWAR101M10
C	201		CKSRYB103K50
C	202		CEJA101M16
C	203		CEWAS100M16
C	204		CEWAS100M16
C	205		CEJA100M16
C	301		CEJA330M10
C	351		CKSYB474K16
C	352		CKSYB474K16
C	353		CKSYB474K16
C	354		CKSYB474K16
C	355	4700µF/16V	CCH1302
C	356		CKSYB104K50
C	357		CEJA1R0M50
C	358		CKSYB225K16
C	359		CEJA100M16
C	360		CKSYB473K50
C	361		CEWAR100M16
C	362		CEWAR100M16
C	363		CKSRYB102K50
C	364		CKSRYB102K50
C	367		CEWAR100M16
C	368		CEWAR100M16
C	369		CKSRYB102K50
C	370		CKSRYB102K50
C	371		CKSQYB474K16
C	372		CKSQYB474K16
C	377		CKSQYB474K16
C	378		CKSQYB474K16
C	379		CKSYB225K16
C	401		CKSRYB183K25
C	402		CKSRYB183K25
C	403		CCSQCH101J50
C	404		CEJA101M10
C	405		CKSQYB472K50
C	408		CCSQCH101J50
C	409		CCSQCH101J50
C	410		CKSQYB103K50
C	429		CEJA4R7M35
C	430		CEJA4R7M35
C	432		CKSQYB103K50
C	433	470µF/16V	CCH1183
C	434		CKSQYB225K10
C	435		CKSQYB473K25
C	436		CKSQYB473K25
C	438		CCSQCH101J50
C	439		CKSRYB103K50
C	606		CKSRYB104K16
C	607		CCSRCH200J50
C	608		CCSRCH200J50
C	611		CKSQYB103K50
C	616		CEJA2R2M50
C	618		CKSQYB103K50
C	624		CKSYB102K50
C	626		CKSRYB103K50
C	751		CCSRCH220J50
C	752		CCSRCH220J50
C	753		CCSRCH220J50
C	754		CCSRCH220J50
C	755		CCSRCH220J50
C	756		CKSQYB105K10
C	757		CCSQCH101J50
C	758		CCSQCH101J50
C	759		CKSQYB105K10
C	760		CCSRCH101J50
C	801		CKSQYB103K50
C	802		CKSRYB103K50
C	803		CEJA100M16
C	804		CKSQYB103K50
C	806		CKSRYB221K50
C	807		CKSRYB221K50
C	808		CEJA100M16
C	809		CEJA101M10
C	811		CEVNP4R7M16
C	812		CKSQYB103K50
C	854		CKSQYB103K50
C	855		CKSQYB103K50
C	856		CKSQYB102K50

=====Circuit Symbol and No.		===Part Name	Part No.
C	857		CCSQCH101K50
C	858		CEJA470M10
C	859		CKSQYB103K50
C	860		CEJA100M16
C	861		CKSQYB103K50
C	862		CKSQYB103K50
C	1901		CKSRYB103K50
C	1902		CEJA470M6R3
C	1903	470µF/16V	CCH1183
C	1904		CKSYB225K16
C	1905		CKSQYB473K50
C	1906		CKSQYB473K50
C	1907		CKSRYB473K16
C	1908		CEJA1R0M50
C	1909		CKSYB104K50

J Unit Number: EWM1007 Unit Name : Deck Unit

MISCELLANEOUS

IC	251	IC	HA12163
IC	351	IC	PA2020A
Q	271	Transistor	2SC4116
Q	351	Transistor	2SB1260
Q	352	Transistor	2SC4102
D	351	Diode	MA141K
VR	301	Semi-fixed 33kΩ(B)	CCP1130
VR	302	Semi-fixed 33kΩ(B)	CCP1130

RESISTORS

R	255		RS1/16S181J
R	256		RS1/16S181J
R	257		RS1/16S183J
R	258		RS1/16S183J
R	259		RS1/16S133J
R	260		RS1/16S133J
R	261		RS1/16S274J
R	262		RS1/16S274J
R	271		RS1/16S183J
R	272		RS1/8S223J
R	273		RS1/8S223J
R	274		RS1/8S103J
R	275		RS1/16S473J
R	276		RS1/16S104J
R	277		RS1/16S224J
R	278		RS1/16S104J
R	281		RS1/8S0R0J
R	282		RS1/8S0R0J
R	283		RS1/8S0R0J
R	284		RS1/8S0R0J
R	285		RS1/16S0R0J
R	286		RS1/16S0R0J
R	288		RS1/16S0R0J
R	289		RS1/16S0R0J
R	322		RS1/8S223J
R	351		RS1/16S102J
R	352		RS1/16S102J
R	353		RS1/16S102J
R	354		RS1/16S102J
R	355		RS1/10S274J
R	356		RS1/10S202J
R	357		RS1/10S472J
R	358		RS1/10S103J
R	359		RS1/10S103J
R	360		RS1/10S102J
R	361		RS1/10S622J
R	373		RS1/8S0R0J
R	374		RS1/8S0R0J
R	375		RS1/8S0R0J
R	401		RS1/16S273J

=====Circuit Symbol and No.		===Part Name	Part No.
R	402		RS1/16S223J
R	403		RS1/16S274J
R	404		RS1/16S823J
R	405		RS1/16S274J

CAPACITORS

C	251		CKSRYB391K50
C	252		CKSRYB391K50
C	253		CKSRYB391K50
C	254		CKSRYB391K50
C	255		CKSRYB103K25
C	256		CKSRYB103K25
C	271		CEV1R0M50
C	272		CKSQYB104K16
C	301		CKSYB474K16
C	302		CKSYB474K16
C	309		CKSQYB104K16
C	310		CKSQYB104K16
C	351		CKSYB224K25
C	352		CKSQYB392K50
C	353		CKSQYB103K50
C	354		CKSQYB103K50
C	355		CKSYB104K50
C	356		CKSQYB103K50
C	401		CKSRYB182K50
C	402		CKSRYB822K50
C	403		CKSRYB333K16
C	404		CKSRYB471K50

Grille PCB Unit
Consists of
- Grille PCB(A)
- Grille PCB(B)
- Flap PCB Unit

D E F Unit Number : Unit Name : Grille PCB Unit

MISCELLANEOUS

IC	902	IC	SED1526F0A
IC	903	IC	PD6317A
IC	905	IC	S-80734ANDYI
IC	1902	IC	SBX8035-H
Q	971	Transistor	2SC2712
D	901	LED	CL170FGCD
D	902	LED	CL170FGCD
D	903	LED	CL170FGCD
D	910	LED	CL170FGCD
D	911	LED	CL170FGCD
D	912	LED	CL170FGCD
D	913	LED	CL170FGCD
D	914	LED	CL170FGCD
D	926	LED	CL170UBX
D	927	LED	CL170UBX
D	930	LED	CL170UBX
D	931	LED	CL170FGCD
D	932	LED	CL170FGCD
D	933	LED	CL170FGCD
D	934	LED	CL170UBX
D	940	LED	CL170UBX
D	943	LED	CL170UBX
D	991	Diode	MA110
L	905	Inductor	LCTA2R2J4532
L	907	Coil	LCTB150K3216
L	922	Inductor	LCTA4R7J3225
L	923	Inductor	LCTB4R7K3216
X	901	Radiator 3.77MHz	CSS1427
S	901	Spring Switch	CSN1051
S	902	Switch	CSG1127

=====Circuit Symbol and No.		===Part Name	Part No.
S	903	Switch	CSG1127
S	904	Switch	CSG1127
S	905	Switch	CSG1127
S	906	Switch	CSG1127
S	907	Switch	CSG1127
S	910	Switch	CSG1041
S	911	Switch	CSG1041
S	912	Switch	CSG1041
S	913	Switch	CSG1111
S	915	Switch	CSG1127
S	916	Switch	CSG1127
S	917	Switch	CSG1129
S	918	Switch	CSG1129
S	919	Switch	CSG1111
S	921	Switch	CSG1129
S	922	Switch	CSG1129
S	923	Switch	CSG1111
S	924	Switch	CSG1111
S	925	Switch	CSG1111
S	926	Switch	CSG1111
S	927	Switch	CSG1127
S	928	Switch	CSG1111
S	929	Switch	CSG1129
VR	901	Semi-fixed 330kΩ(B)	CCP1028
VR	902	Encoder	CSD1042
LCD	901	LCD	CAW1552

RESISTORS

R	900		RS1/8S331J
R	901		RS1/8S331J
R	902		RS1/8S391J
R	903		RS1/8S331J
R	904		RS1/8S391J
R	905		RS1/8S391J
R	906		RS1/16S472J
R	907		RS1/16S821J
R	908		RS1/16S122J
R	909		RS1/16S182J
R	910		RS1/16S302J
R	911		RS1/16S622J
R	912		RS1/16S223J
R	915		RS1/8S331J
R	916		RS1/8S391J
R	917		RS1/8S391J
R	918		RS1/8S471J
R	920		RS1/16S472J
R	921		RS1/16S821J
R	922		RS1/16S122J
R	923		RS1/16S182J
R	924		RS1/10S101J
R	925		RS1/16S824J
R	926		RS1/16S155J
R	927		RS1/16S102J
R	928		RS1/16S102J
R	929		RS1/16S102J
R	930		RS1/10S102J
R	931		RS1/16S471J
R	940		RS1/10S472J
R	941		RS1/10S821J
R	942		RS1/10S122J
R	943		RS1/10S182J
R	944		RS1/10S302J
R	945		RS1/10S622J
R	947		RS1/10S472J
R	950		RS1/10S392J
R	951		RS1/10S302J
R	952		RS1/10S622J
R	953		RS1/10S472J

=====Circuit Symbol and No.		===Part Name	Part No.
R	954		RS1/10S821J
R	955		RS1/10S122J
R	956		RS1/10S182J
R	957		RS1/10S302J
R	958		RS1/10S622J
R	959		RS1/10S223J
R	960		RS1/8S331J
R	961		RS1/8S331J
R	962		RS1/8S471J
R	963		RS1/8S561J
R	964		RS1/8S391J
R	966		RS1/8S471J
R	967		RS1/16S471J
R	968		RS1/16S471J
R	969		RS1/16S471J
R	970		RS1/16S473J
R	971		RA3C473J
R	972		RA4C102J
R	973		RS1/16S102J
R	974		RS1/16S102J
R	975		RS1/16S471J
R	976		RA4C471J
R	977		RA4C471J
R	978		RS1/16S471J
R	979		RS1/16S471J
R	981		RS1/16S473J
R	983		RS1/16S473J
R	984		RS1/10S103J
R	985		RS1/10S223J
R	986		RS1/10S471J
R	987		RS1/10S104J
R	988		RS1/10S104J
R	989		RS1/8S331J
R	990		RS1/8S391J
R	991		RS1/16S102J
R	992		RS1/16S124J
R	993		RS1/16S123J
R	1000		RS1/8S391J
R	1001		RS1/8S391J
R	1002		RS1/8S471J
R	1003		RS1/16S474J
R	1004		RS1/8S561J
R	1006		RS1/8S471J
R	1007		RS1/8S561J
R	1012		RS1/8S561J
R	1015		RS1/8S561J
R	1016		RS1/8S561J
R	1017		RS1/8S471J
R	1018		RS1/8S471J
R	1021		RS1/8S471J

CAPACITORS

C	904		CKSRYB103K50
C	905		CKSYB225K16
C	908		CKSRYB103K50
C	915		CKSQYB104K25
C	916		CKSYB225K16
C	917		CKSQYB104K25
C	922		CKSYF226Z10
C	923		CKSQYB104K25
C	924		CKSQYB103K50
C	928		CKSQYB104K25
C	929		CKSQYB104K25
C	930		CKSYB225K16
C	931		CKSQYB105K16
C	932		CKSQYB105K16
C	933		CKSQYB105K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	934		CKSQYB105K16
C	935		CKSQYB105K16
C	936		CKSQYB105K16
C	937		CKSQYB105K16
C	939		CKSRYB103K50
C	940		CKSRYB103K50
C	941		CKSRYB221K50
C	957		CKSYB225K16
C	960		CKSQYB103K50
C	961		CKSQYB103K50
C	962		CKSQYB103K50
C	963		CKSQYB474K16
C	964		CKSRYB103K50
C	965		CCSRCH101J50
C	966		CCSRCH101J50
C	967		CSZS4R7M6R3
C	971		CKSQYB471K50
C	972		CKSQYB102K50
C	973		CKSQYB102K50
C	980		CKSQYB104K25
C	982		CKSYB225K16
C	983		CKSQYB104K25
C	984		CKSQYB104K25
C	985		CKSQYB104K25
C	986		CKSQYB104K25
C	987		CKSQYB104K25

C Unit Number: CWM6725
Unit Name : CD Power Unit

MISCELLANEOUS

IC	1261	IC	CA0008AM
IC	1271	IC	TA2050F
Q	1201	Transistor	2SD2396
Q	1202	Transistor	IMD2A
Q	1211	Transistor	2SD2396
Q	1212	Transistor	IMD2A
Q	1221	Transistor	2SD2396
Q	1222	Transistor	2SA1037K
Q	1223	Transistor	DTC124EK
Q	1271	Transistor	2SA1037K
Q	1272	Transistor	DTC124EK
D	1201	Diode	HZS9L(B1)
D	1211	Diode	HZS7L(A2)
D	1212	Diode	ERA15-02VH
D	1213	Diode	1SS133
D	1221	Diode	HZS9L(B2)
D	1241	Diode	1SS133
D	1251	Diode	ERA15-02VH
D	1252	Diode	ERA15-02VH
D	1261	Diode	1SS133
L	1241	Inductor	CTF1420
L	1246	Inductor	CTF1410
L	1261	Ferri-Inductor	LAU4R7K
FU	1252	Micro-Fuse 400mA	CEK1184
FU	1253	Micro-Fuse 400mA	CEK1184
FU	1254	Micro-Fuse 200mA	CEK1189

RESISTORS

R	1201		RD1/4PU221J
R	1202		RD1/4PU221J
R	1211		RD1/4PU100J
R	1212		RS1/10S103J
R	1213		RS1/10S162J
R	1214		RS1/10S103J
R	1221		RS1/10S223J
R	1222		RS1/10S222J
R	1223		RD1/4PU391J
R	1241		RS1/10S473J
R	1242		RS1/10S221J
R	1243		RA4C221J
R	1244		RS1/10S0R0J
R	1245		RS1/16S0R0J
R	1246		RS1/16S0R0J
R	1247		RS1/16S0R0J
R	1261		RS1/10S102J
R	1262		RS1/10S102J
R	1263		RS1/10S473J
R	1264		RS1/10S473J
R	1265		RS1/10S101J
R	1266		RS1/10S101J
R	1267		RS1/10S620J
R	1268		RS1/10S103J
R	1271		RS1/10S181J
R	1272		RS1/10S181J
R	1273		RS1/10S223J
R	1274		RS1/10S223J
R	1275		RS1/10S102J
R	1276		RS1/10S102J
R	1277		RS1/10S222J
R	1278		RS1/10S223J
R	1279		RS1/10S472J

CAPACITORS

C	1201		CKSQYB473K50
C	1202		CKSQYB102K50
C	1203		CEJA101M10
C	1211	2200µF/16V	CCH1001
C	1212		CEJA100M16
C	1213		CKSQYB103K50
C	1214		CEJA470M10
C	1215		CKSQYB103K50
C	1221		CEJA101M16
C	1222		CKSQYB103K50
C	1223		CEAS331M10
C	1224		CKSQYB103K50
C	1241		CEJA101M16
C	1242		CEJA101M16
C	1243		CKSQYB221K50
C	1245		CEWAR100M16
C	1246		CEWAR100M16
C	1247		CKSQYB103K50
C	1249		CKSRYB103K50
C	1251	0.22F/5.5V	CCL1037
C	1252	0.22F/5.5V	CCL1037
C	1261		CKSQYB104K50
C	1271		CEH1R0M50
C	1272		CEH1R0M50
C	1273		CEH1R0M50
C	1274		CEH1R0M50
C	1275		CEJANP100M10
C	1276		CEJANP100M10
C	1277		CKSQYB104K50
C	1278		CEH100M16
C	1279		CEH100M16

G Unit Number: CWM6755
Unit Name : DSP Unit

MISCELLANEOUS

IC	3001	IC	PD5510A
IC	3101	IC	AK7712AVT
IC	3102	IC	TC9331F
IC	3103	IC	M5M51016BTP-70LL
IC	3200	IC	S-80734ANDYI

=====Circuit Symbol and No.		===Part Name	Part No.
IC	3301	IC	PM0009BM
D	3200	Diode	MA152WA
L	3001	Inductor	CTF1410
L	3002	Inductor	CTF1410
L	3003	Inductor	CTF1410
L	3004	Inductor	CTF1410
L	3039	Inductor	CTF1399
L	3040	Inductor	CTF1399
L	3041	Inductor	CTF1410
L	3042	Inductor	CTF1410
L	3043	Inductor	CTF1410
L	3044	Inductor	CTF1410
L	3101	Inductor	CTF1410
L	3102	Inductor	CTF1410
L	3103	Inductor	CTF1410
L	3104	Inductor	CTF1410
L	3301	Inductor	CTF1410
L	3302	Inductor	CTF1410
L	3303	Inductor	CTF1410
L	3304	Inductor	CTF1410
L	3305	Inductor	CTF1410
L	3306	Inductor	CTF1410
X	3001	Radiator 10.00MHz	CSS1428
X	3101	Crystal Resonator 16.9344MHz	CSS1067
X	3102	Crystal Resonator 32.0MHz	CSS1360

RESISTORS

R	3002		RA4C102J
R	3003		RA3C102J
R	3004		RS1/16S681J
R	3005		RS1/16S681J
R	3006		RS1/16S681J
R	3007		RS1/16S681J
R	3008		RS1/16S681J
R	3009		RS1/16S473J
R	3010		RS1/16S102J
R	3011		RS1/16S102J
R	3012		RS1/16S102J
R	3013		RS1/16S105J
R	3016		RA3C102J
R	3017		RA3C473J
R	3018		RS1/16S102J
R	3019		RA3C102J
R	3020		RS1/16S102J
R	3021		RA3C102J
R	3022		RA4C473J
R	3024		RS1/16S102J
R	3027		RS1/16S102J
R	3029		RS1/16S473J
R	3030		RS1/16S102J
R	3031		RS1/16S102J
R	3033		RS1/16S473J
R	3101		RS1/16S473J
R	3102		RS1/16S473J
R	3103		RA4C102J
R	3104		RA4C102J
R	3105		RA4C102J
R	3106		RA4C102J
R	3107		RS1/16S473J
R	3108		RA4C102J
R	3109		RA4C102J
R	3110		RA4C102J
R	3111		RA4C102J
R	3112		RS1/16S105J
R	3113		RS1/16S105J
R	3114		RS1/16S102J
R	3115		RS1/16S102J

=====Circuit Symbol and No.		===Part Name	Part No.
R	3116		RS1/16S331J
R	3117		RS1/16S0R0J
R	3141		RS1/16S473J
R	3151		RS1/10S151J
R	3152		RS1/10S151J
R	3153		RS1/10S151J
R	3154		RS1/10S151J
R	3200		RS1/16S124J
R	3201		RS1/16S102J

CAPACITORS

C	3002		CKSYB106K6R3
C	3004		CCSRCH220J50
C	3005		CCSRCH220J50
C	3006		CCSRCH220J50
C	3007		CCSRCH220J50
C	3008		CCSRCH220J50
C	3102		CKSQYB103K50
C	3104		CCSRCH100D50
C	3105		CCSRCH100D50
C	3106		CKSQYB104K25
C	3107		CKSYB106K6R3
C	3108		CKSQYB104K25
C	3109		CSZSR470M6R3
C	3110		CKSQYB104K25
C	3111		CKSYB106K6R3
C	3112		CKSQYB104K25
C	3113		CKSQYB103K25
C	3114		CKSYB106K6R3
C	3115		CCSQCH5R0C50
C	3116		CCSQCH5R0C50
C	3117		CKSYB106K6R3
C	3119		CKSYB106K6R3
C	3151		CKLSRR103K16
C	3152		CKLSRR103K16
C	3153		CKLSRR103K16
C	3154		CKLSRR103K16
C	3155		CKLSRB152K50
C	3156		CKLSRB152K50
C	3201		CKSQYB104K25
C	3301		CKSYB475K10
C	3302		CKSYB475K10
C	3303		CKSYB475K10
C	3304		CKSYB475K10
C	3307		CKSQYB105K16
C	3308		CKSYB106K6R3
C	3309		CKSQYB104K25
C	3310		CKSQYB473K50
C	3311		CKSQYB562K50
C	3312		CKSQYB104K25

H Unit Number : CWX2358
Unit Name : Control Unit

MISCELLANEOUS

IC	201	IC	UPD63710GC
IC	301	IC	BA5985FM
IC	602	IC	AK4321VF
IC	701	IC	BA05SFP
IC	901	IC	PE5011C
Q	101	Transistor	2SB1132
Q	901	Transistor	UN2111
D	801	LED	CL200IRX
D	802	LED	CL200IRX
TH	901	Thermistor	CCX1037
X	201	Ceramic Oscillator 16.934MHz	CSS1456
X	901	Radiator 8.380MHz	CSS1453
S	801	Spring Switch(HOME)	CSN1051
S	802	Spring Switch(CLAMP)	CSN1052

=====Circuit Symbol and No.		===Part Name	Part No.
RESISTORS			
R	101		RS1/8S120J
R	102		RS1/8S100J
R	103		RS1/16S222J
R	201		RS1/16S104J
R	205		RS1/16S103J
R	206		RS1/16S393J
R	207		RS1/16S182J
R	208		RS1/16S304J
R	210		RS1/16S0R0J
R	212		RS1/16S103J
R	213		RS1/16S103J
R	214		RS1/16S123J
R	215		RS1/16S273J
R	216		RS1/16S273J
R	217		RS1/16S681J
R	218		RS1/16S681J
R	309		RS1/16S473J
R	310		RS1/16S473J
R	501		RS1/16S102J
R	502		RS1/16S681J
R	503		RS1/16S681J
R	504		RS1/16S681J
R	505		RS1/16S681J
R	506		RS1/16S681J
R	511		RS1/16S0R0J
R	601		RS1/16S102J
R	602		RS1/16S102J
R	603		RS1/16S223J
R	604		RS1/16S223J
R	606		RS1/16S0R0J
R	607		RS1/16S0R0J
R	612		RA4C0R0J
R	801		RS1/8S751J
R	802		RS1/8S751J
R	901		RS1/16S222J
R	902		RS1/16S473J
R	903		RS1/16S222J
R	904		RS1/16S473J
R	905		RN1/16SE1502D
R	906		RS1/16S473J
R	908		RS1/16S222J
R	909		RS1/16S104J
R	910		RS1/16S103J
R	911		RS1/16S223J
R	912		RS1/16S473J
R	917		RS1/16S0R0J
CAPACITORS			
C	101		CCSRCH102J25
C	102		CKSQYB104K16
C	103		CEV101M6R3
C	104		CEV470M6R3
C	105		CKSQYB334K16
C	106		CKSQYB334K16
C	107		CKSQYB334K16
C	201		CKSQYB104K16
C	202		CEV101M6R3
C	203		CKSQYB104K16
C	204		CKSRYB332K50
C	205		CKSQYB104K16
C	206		CKSRYB392K50
C	207		CKSQYB224K16
C	208		CCSRCH270J50

=====Circuit Symbol and No.		===Part Name	Part No.
C	209		CCSRCJ3R0C50
C	210		CCSRCH221J50
C	211		CCSRCH101J50
C	212		CKSRYB682K25
C	213		CKSQYB104K16
C	214		CKSRYB104K16
C	215		CKSQYB104K16
C	216		CKSRYB104K16
C	217		CKSRYB104K16
C	218		CKSRYB104K16
C	219		CKSRYB104K16
C	220		CKSRYB104K16
C	223		CKSQYB471K50
C	301		CEV101M10
C	601		CEV4R7M35
C	602		CEV4R7M35
C	603		CCSQSL152J50
C	604		CCSQSL152J50
C	605		CEV470M6R3
C	606		CKSRYB104K16
C	607		CKSRYB104K16
C	608		CKSRYB104K16
C	609		CEV100M16
C	610		CKSRYB104K16
C	612		CKSRYB104K16
C	701		CEV101M6R3
C	702	22µF/6.3V	CCH1300
C	703		CKSQYB334K16
C	801		CKSRYB103K25
C	802		CKSRYB103K25
C	901		CKSRYB472K50
C	902		CKSYB475K10
C	903		CKSRYB103K25

I Unit Number :
Unit Name : Photo Unit

Q	1	Photo-transistor	CPT230SX-TU
Q	2	Photo-transistor	CPT230SX-TU

K Unit Number :
Unit Name : PCB Unit

S	1	Switch(LOAD)	ESG1004
S	2	Switch(70µS)	ESG1004
EGN	1	Photo-Interrupter	EGN1005
R	1		RD1/4PM181J

L Unit Number:
Unit Name : Reel PCB

EGN	2	Photo-Interrupter	EGN1006
EGN	3	Photo-Interrupter	EGN1006

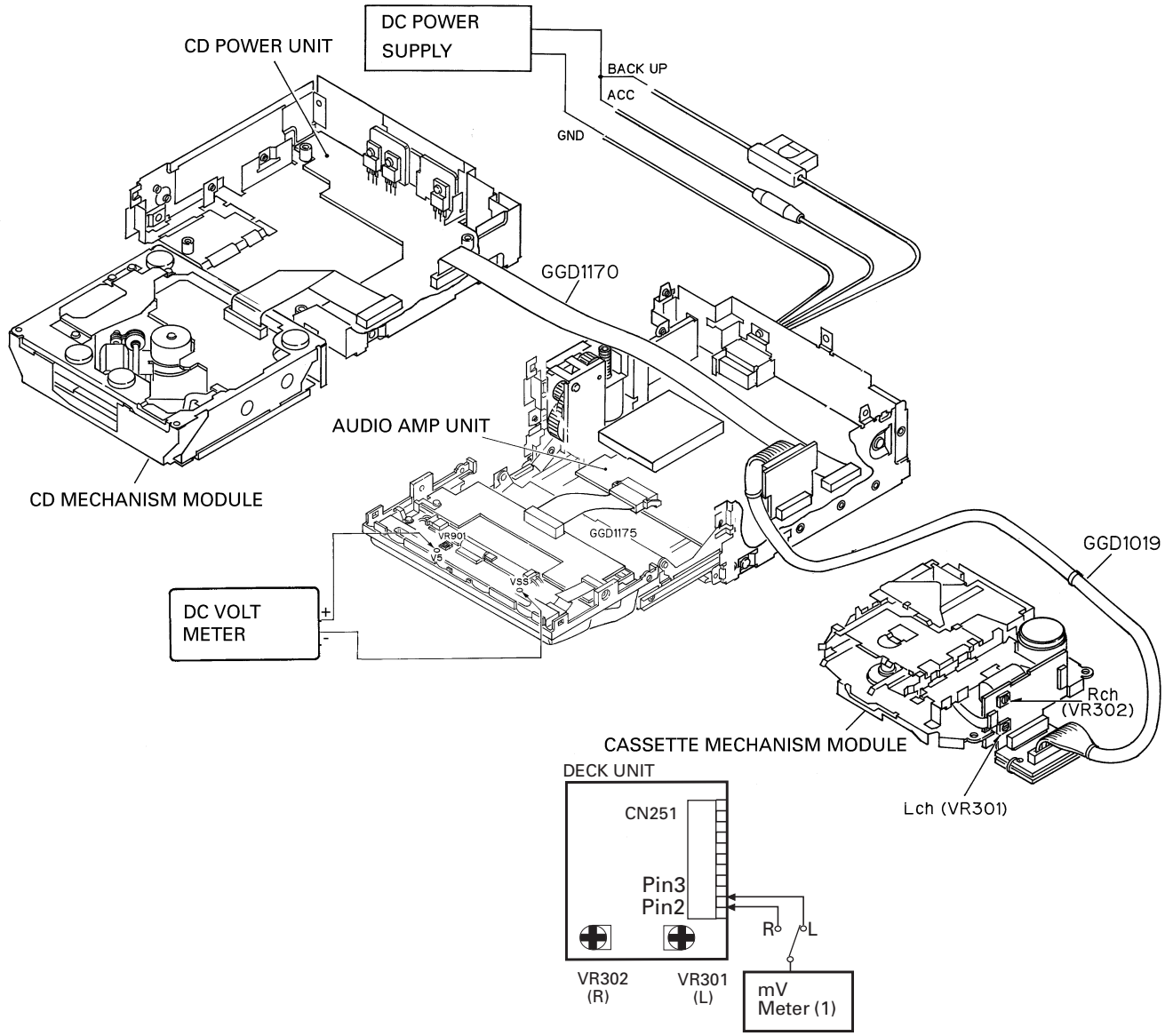
Miscellaneous Parts List

		Pickup Unit(Service)(P8)	CXX1285
M	1	Motor Unit(CARRIAGE)	CXB2190
M	2	Motor Unit(LOADING)	CXB2195
M	3	Motor Unit(SPINDLE)	CXB2562
HD	1	Head Assy	EXA1452
M	1	Motor Unit(MAIN)	EXA1454
M	2	Motor Unit(SUB)	EXA1485

6. ADJUSTMENT

6.1 GRILLE,CASSETTE SECTION

● **Connection Diagram**



CONTRAST VOLTAGE ADJUSTMENT

No.	Adjustment Point	Adjustment Method (Switch Position)
1	VR901	DC V Meter : -2.4V±0.1V

DOLBY NR ADJUSTMENT

No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz, 200nwb/m)	VR301(Lch), VR302(Rch)	mV Meter(1) : -8.24dBs(300mV)±1dB (Dolby NR Switch : OFF)

6.2 CD ADJUSTMENT

1) Precautions

- This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to REFO(approx. 2.5V) instead of GND.
  If REFO and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.
  Do not connect the negative probe of the measuring equipment to REFO and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to REFO with the channel 2 negative probe connected to GND.
  Since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.
  If by accident REFO comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.

- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.

- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit.Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.
  *During PLAY, even if the eject button is pressed,the disc will not be ejected and the unit will remain in the PLAY mode.
  *The unit will not load a disc.
  When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

2) Test Mode

This mode is used for adjusting the CD mechanism module of the device.

- Test mode starting procedure
  Reset while pressing the **DSP** and ► keys together.

- Test mode cancellation
  Switch ACC, back-up OFF.

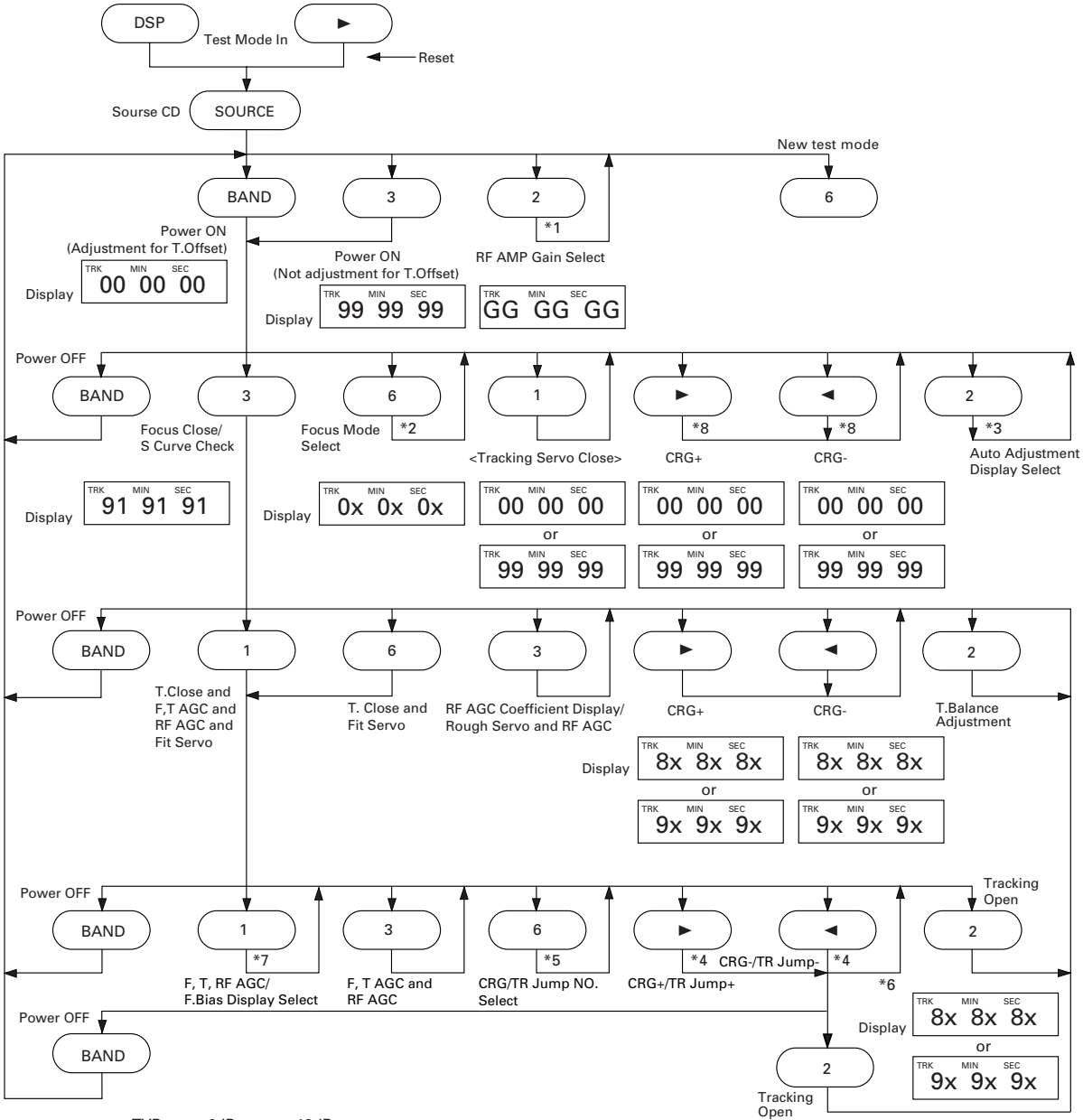
- After pressing the EJECT key, do not press any other key until the disk is completely ejected.

- If the ► or ◄ key is pressed while focus search is in progress, immediately turn the power off (otherwise the actuator may be damaged due to adhesion of the lenses).

- Jump operation of TRs other than 100TR continues after releasing the key. CRG move and 100TR jump operations are brought into the "Tracking close" status when the key is released.

- Powering Off/On resets the jump mode to "Single TR (91)", the RF AMP gain setting to 0 dB, and the automatic adjustment value to the initial value.

● Flow Chart



*1 → TYP → +6dB → +12dB →
Display 06 06 06 12 12 12

*2 → Focus Close → S Curve Check →
Display 00 00 00 (99 99 99) 01 01 01

*3 → F.Offset Display → RF.Offset Display → F.Cansel Display →

F.Cancel Value = {Top Rank 8bit of Set Value (7F [H] to 80 [H]) + 128} / 4
= 63 [D] to (32 [D]) to 00 [D]

*4 Single TR/32TR/100TR

*5 → Single TR → 32TRK → 100TRK → CRG Move →
Display 9x(8x):91(81) 92(82) 93(83) 94(84)

*6 CRG Move, 100TR Jump Only

*7 → TRK, MIN, SEC → F.AGC Gain → T.AGC Gain → RF AGC Gain →
(F,T.AGC Gain = (Present Value/Initial Value) x 20)

*8 Voltage of CRG Motor = 2 [V]

6.3 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

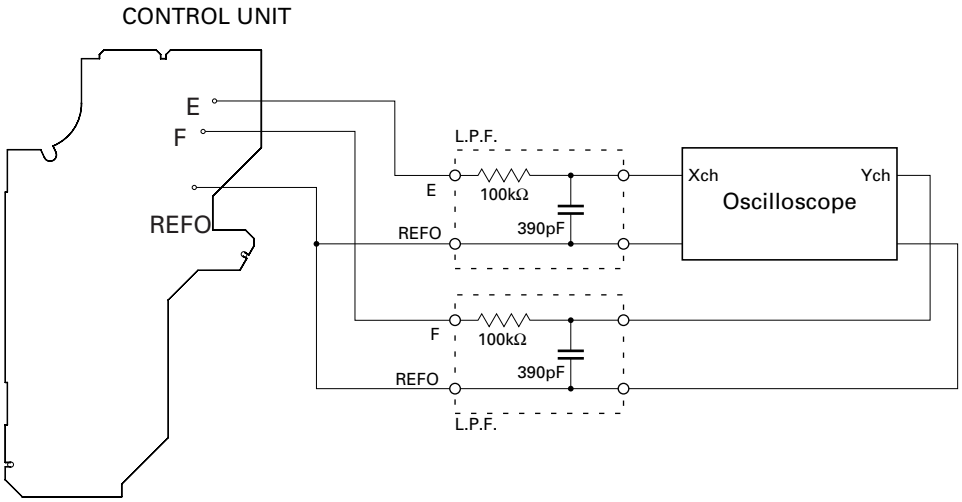
• **Note :**
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO
• Disc	• ABEX TCD-784
• Mode	• TEST MODE



• **Checking Procedure**
1. In test mode, load the disc and switch the 5V regulator on.
2. Using the ► and ◄ buttons, move the PU unit to the innermost track.
3. Press key **3** to close focus, the display should read "91". Press key **2** to implement the tracking balance adjustment the display should now read "81". Press key **3** 2 times. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

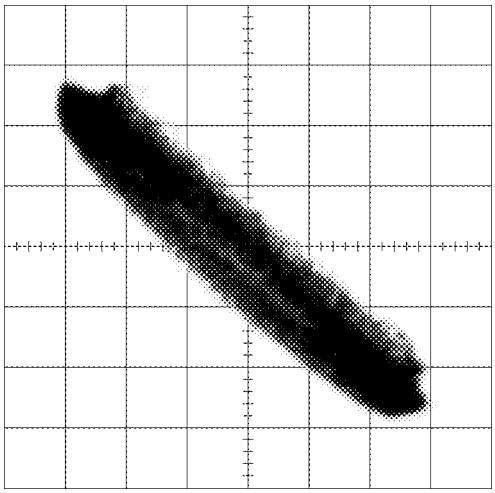
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**
Reloading the disc changes the clamp position and may decrease the "wobble".

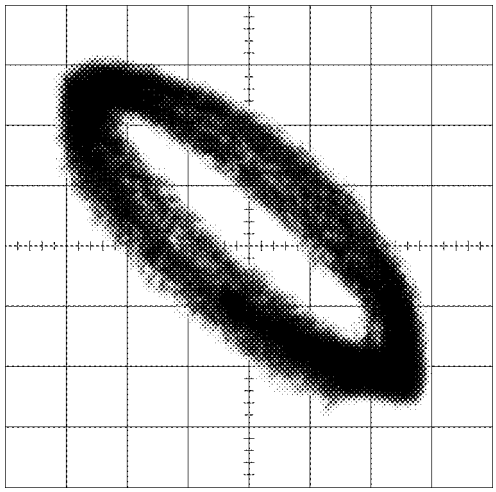
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

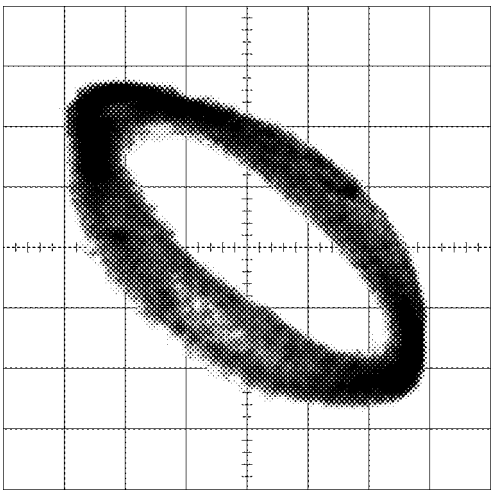
0°



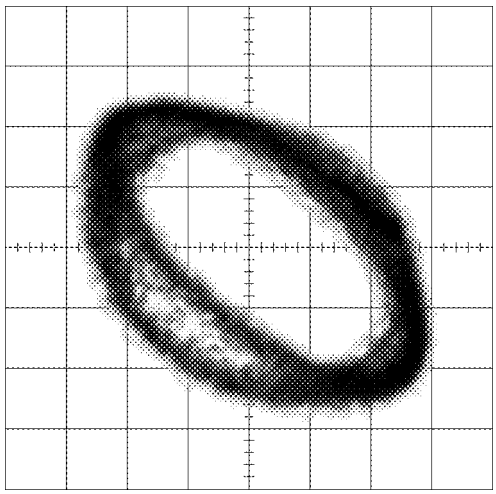
30°



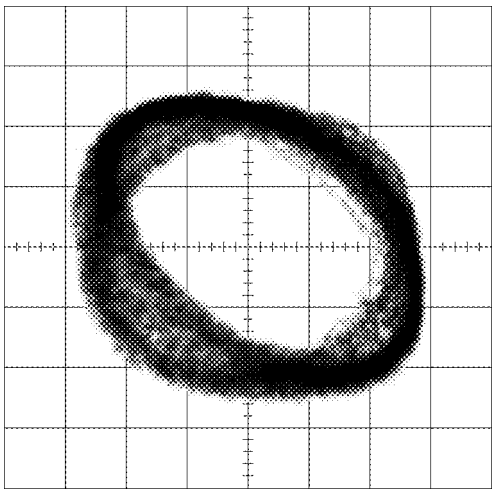
45°



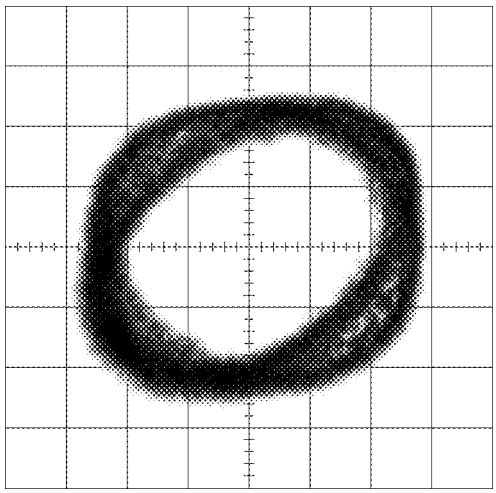
60°



75°



90°



7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE

● Error Messages

If a CD is not operative or stopped during operation due to an error, the error mode is turned on and cause(s) of the error is indicated with a corresponding number. This arrangement is intended at reducing nonsense calls from the users and also for facilitating trouble analysis and repair work in servicing.

(1) Basic Indication Method

1) When SERRORM is selected for the CSMOD (CD mode area for the system), error codes are written to DMIN (minutes display area) and DSEC (seconds display area). The same data is written to DMIN and DSEC. DTNO remains in blank as before.

2) Main unit display examples

Depending on display capability of LCD used, display will vary as shown below. xx contains the error number.

8-digit display	6-digit display	4-digit display
ERROR–xx	ERR–xx OR Err–xx	E–xx

(2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. → Failure on home switch or CRG move mechanism.
11	Electricity	Focus Servo NG	Focusing not available. → Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG	Spindle not locked. Sub-code is strange (not readable). → Failure on spindle, stains or damages on disc, or excessive vibrations.
		Subcode NG	A disc not containing CD-R data is found. Turned over disc are found, though rarely. → Failure on home switch or CRG move mechanism.
		RF AMP NG	An appropriate RF AMP gain can't be determined. → CD signal error.
17	Electricity	Setup NG	APC protection doesn't work. Focus can be easily lost. → Damages or stains on disc, or excessive vibrations.
30	Electricity	Search Time Out	Failed to reach target address. → CRG tracking error or damages on disc.
A0	System	Power Supply NG	Power (VD) is ground faulted. → Failure on SW transistor or power supply (failure on connector).

Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).

Unreadable TOC does not constitute an error. An intended operation continues in this case.

A newly designed main unit must conform to the example given above.

Upper digits of an error code are subdivided as shown below:

1x: Setup relevant errors, 3x: Search relevant errors, 3x: Search relevant errors, Ax: Other errors.

● New Test Mode

S-CD plays the same way as before.

If an error such as off focus, spindle unlocking, unreadable sub-code, or sound skipping occurs after setup, its cause and time occurred (in absolute time) are displayed.

During setup, operational status of the control software (internal RAM: CPOINT) is displayed.

These displays and functions are prepared for enhancing aging in the servicing and efficiency of trouble analysis.

(1) Shifting to the New Test Mode

① Turn on the current test mode.

② Select S-CD for the source through the specified procedure including use of the [SOURCE] key, and inserting the disc. Then, press the [6] key while maintaining the regulator turned off.

③ After the above operations, the new test mode remains on irrespective of whether the S-CD is turned on or off. You can reset the new test mode by turning on the reset start.

* With some products, the new test mode can be reset through the same operations as that employed for shifting to the STBY mode (while maintaining the Acc turned off).

(2) Key Correspondence

Key	Test mode		New test mode	
	Power Off	Power On	In-play	Error Production
BAND	To power on (offset adjustment performed)	To power off	–	Time/Err.No. switching
►	–	FWD-Kick	FF/TR+	–
◄	–	REV-Kick	REV/TR-	–
1	–	T.Close (AGC performed) /parameter display switching	Scan	–
2	RF AMP gain switching	Parameter display switching /T.BAL adjustment/T.Open	Mode	–
3	To power on (offset adjustment not performed)	F.Close/RF AGC/F.T.AGC	–	–
6	–	F.Mode switching /T.Close (no AGC)/Jump switching	Auto/Manu	T.No./Time switching

Note: Eject and CD on/off is performed in the same procedure as that for the normal mode.

(3) Cause of Error and Error Code

Code	Class	Contents	Description and cause
40	Electricity	Off focus detected.	FOK goes low. → Damages/stains on disc, vibrations or failure on servo.
41	Electricity	Spindle unlocked.	FOK = Low continued for 50 msec. → Damages/stains on disc, vibrations or failure on servo.
42	Electricity	Sub-code unreadable.	Sub-code was unreadable for 50 msec. → Damages/stains on disc, vibrations or failure on servo.
43	Electricity	Sound skipping detected.	Last address memory function was activated. → Damages/stains on disc, vibrations or failure on servo.

Note: Mechanical errors during aging are not displayed.

The error codes should be indicated in the same way as in the normal mode.

(4) Display of Operational Status (CPOINT) during Setup

Status No.	Contents	Protective action
00	CD+5V ON process in progress.	None
01	Servo LSI initialization (1/3) in progress.	None
02	Servo LSI CRAM initialization in progress.	None
03	Servo LSI initialization (2/3) in progress.	None
04	Offset adjustment (1/3) in progress.	None
05	Offset adjustment (2/3) in progress.	None
06	Offset adjustment (3/3) in progress.	None
07	FZD adjustment in progress.	None
08	Servo LSI initialization (3/3) in progress.	None
10	Carriage move to home position started.	None
11	Carriage move to home position started.	None
12	Carriage is moving toward inner diameter.	Specified 10 seconds has been passed or failure on home switch.
13	Carriage is moving toward outer diameter.	Specified 10 seconds has been passed or failure on home switch.
14	Carriage outer kick in progress.	None
15	Carriage outer diameter feed (1 second) in progress.	None
20	Servo close started.	None
21	Pre-processing for focus search started.	None
22	Spindle rotation and focus search started.	None
23	Waiting for focus close (XSI=Low).	Specified focus search time has been passed.
24	Standing by after focus close is over.	Specified focus search time has been passed.
25	Focus search preprocessing is in progress while setup protection is turned on.	None
26	Focus search preprocessing is in progress while focus recovery is turned on.	None
27	Wait time after focus close is set up.	Off focus.
28	Standing by after focus close is over.	Off focus.
29	Setup (1/2) before T balance adjustment is started.	Off focus.
30	Setup (2/2) before T balance adjustment is started.	Off focus.
31	T balance adjustment started.	Off focus.
32	T balance adjustment (1/2).	Off focus.
33	T balance adjustment (2/2).	Off focus.
34	Waiting for spindle rotation to end. Spindle rough servo.	Off focus.
35	Standing by after spindle rough servo is over.	Off focus.
36	RF AGC started.	Off focus.
37	RF AGC started.	Off focus.
38	RF AGC ending process in progress.	Off focus.
39	Tracking close in progress.	Off focus.
40	Standing by after tracking is closed. Carriage closing in progress.	Off focus.
41	Focus/tracking AGC started.	Off focus.
42	Focus AGC started.	Off focus.
43	Focus AGC in progress.	Off focus.
44	Tracking AGC in progress.	Off focus.
45	Standing by after focus/tracking AGC are over.	Off focus.
46	Spindle processes applicable servo.	Off focus.
47	Check for servo close is started.	Off focus.
48	Check of LOCK pin started.	Off focus or spindle not locked.
49	RF AGC started.	Off focus.
50	RF AGC in progress.	Off focus.
51	Standing by after RF AGC is over.	Off focus.

(5) Display Examples

1) During Setup (When status no. = 11)

TRK No.	MIN.	SEC.
11	11'	11"

2) During Operation (TOC read, TRK search, Play, FF and REV)

The same as in the normal mode.

3) When a Protection Error Occurred

Switch to the following displays (A) and (B) using the [BAND] switch:

(A) Error occurrence timing display in absolute time.

An example: Error occurred in 12th tune at 34'56" in absolute time.

TRK No.	MIN.	SEC.
12	34'	56"

(B) Error No. display

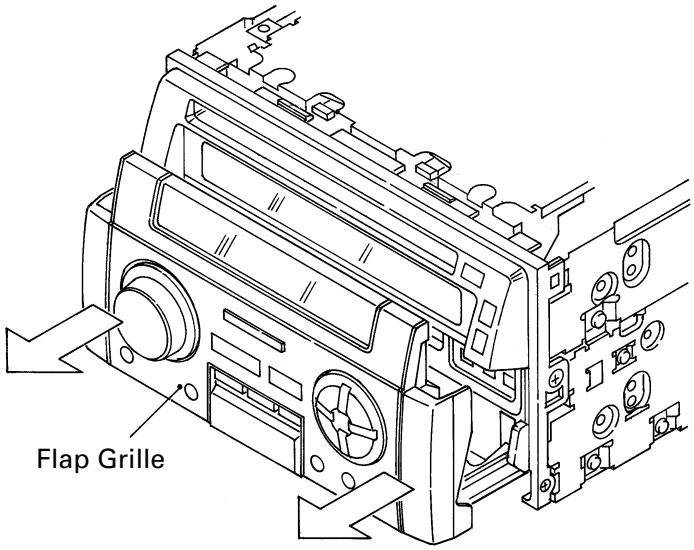
An example: Error #40 (Off focus is detected)

ERROR-40

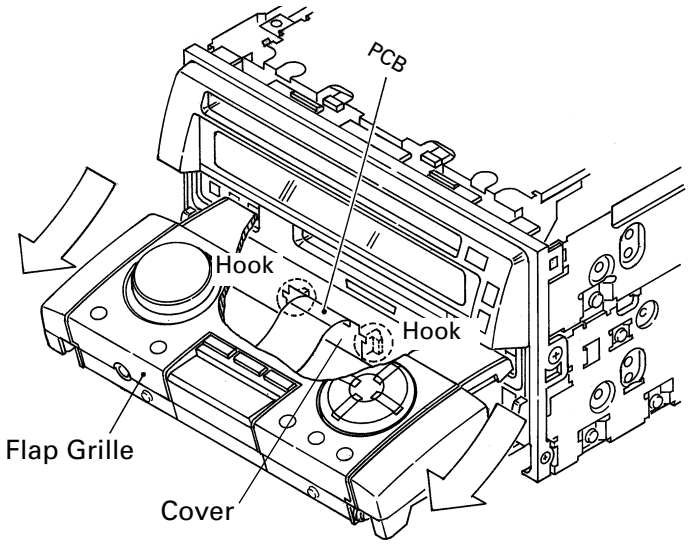
7.1.2 DISASSEMBLY

● **Removing the Flap grille**

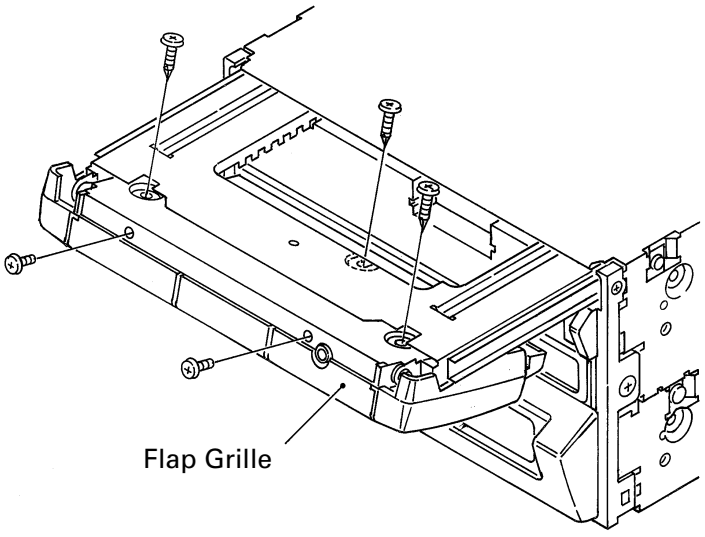
1. While holding the right and left sides of the Flap Grille by hand, pull the flap grille as shown in the figure.



2. While turning the flap grille, level it as shown in the figure.
3. Release the Cover from the two Hooks.
4. Disconnect the PCB.

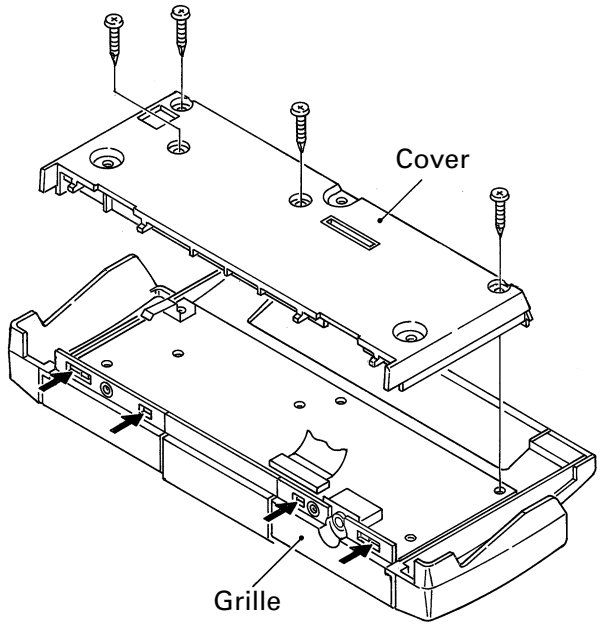


5. Remove the 5 screws. And you can remove the flap grille.



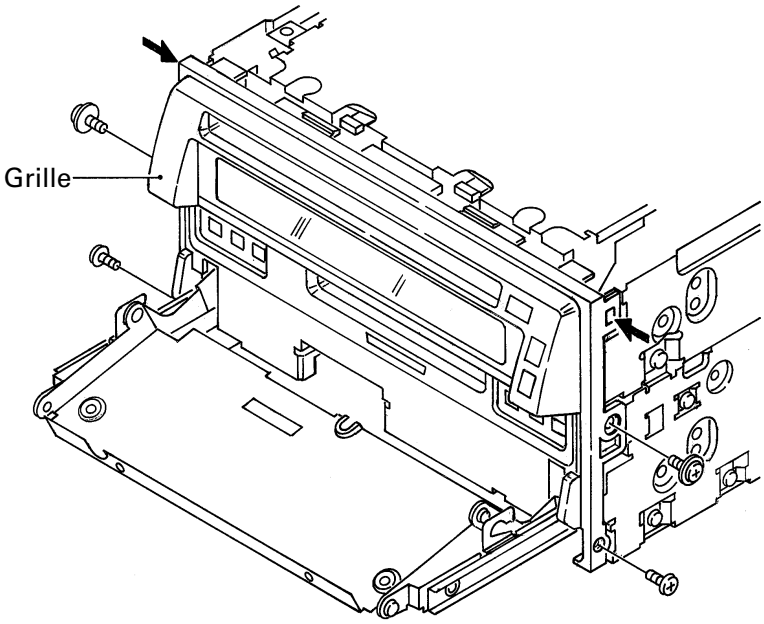
● Removing the Cover

1. Remove the 4 screws.
2. While inserting a flat-bladed screwdriver or something like that into the holes marked with an arrow, release the Cover from the hooks.



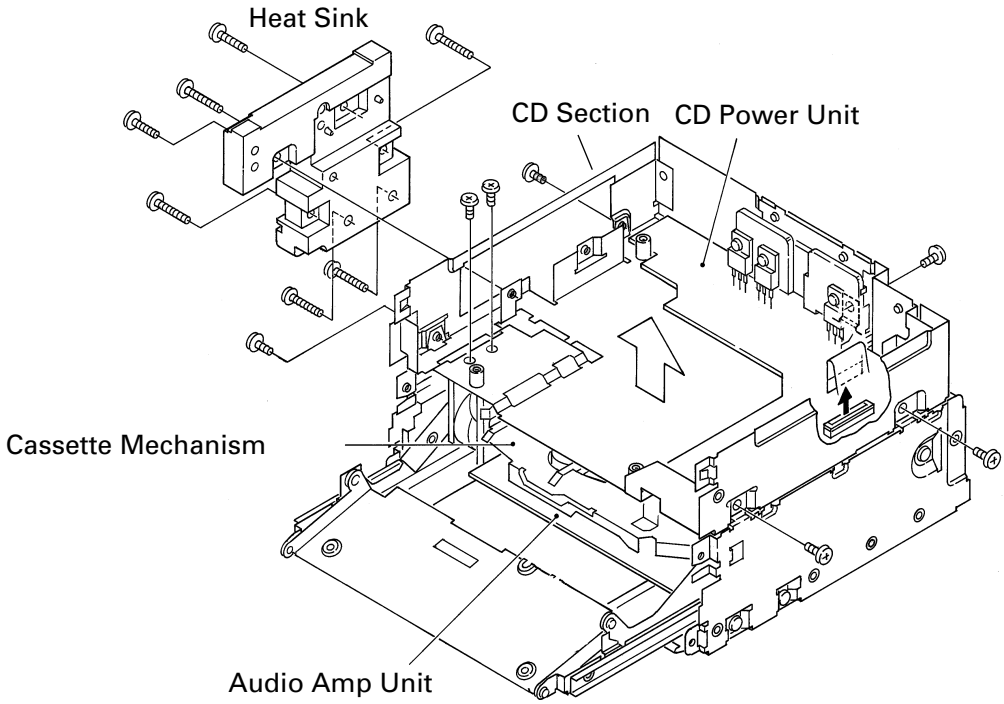
● Removing the Grille

1. Remove the 4 screws.
2. Unhook the Grille at the 2 portions marked with an arrow.



● **Removing the upper block of the CD mech module**

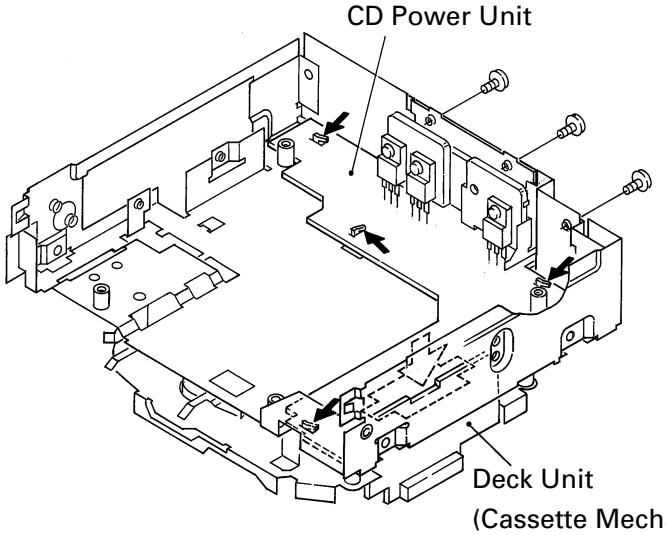
1. Remove the 4 screws and the connector. Then take out the CD Mechnism Module. (Not shown in the figure).
2. Remove the 7 screws and the Heat Sink.
3. Remove the 7 screws and the connector. Lift the CD section together with the Cassette Mechanism Module upwards, and remove it.



● **Removing the CD power unit**

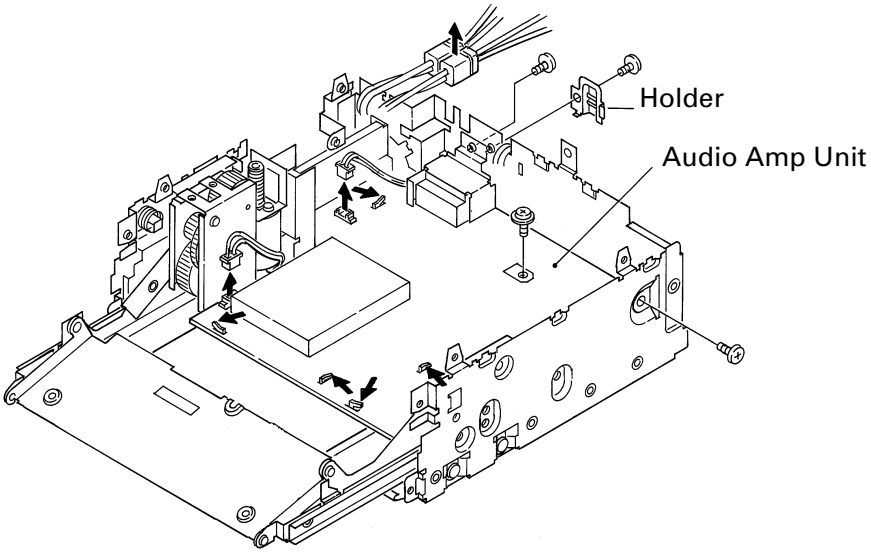
1. Remove the 3 screws.
2. Straighten the 4 hooks marked with an arrow. Remove the CD Power Unit.

When connecting the Deck Unit (Cassette Mechanism Module) to the Audio Amp Unit, push the Deck Unit through the hole by hand to insert the connector.



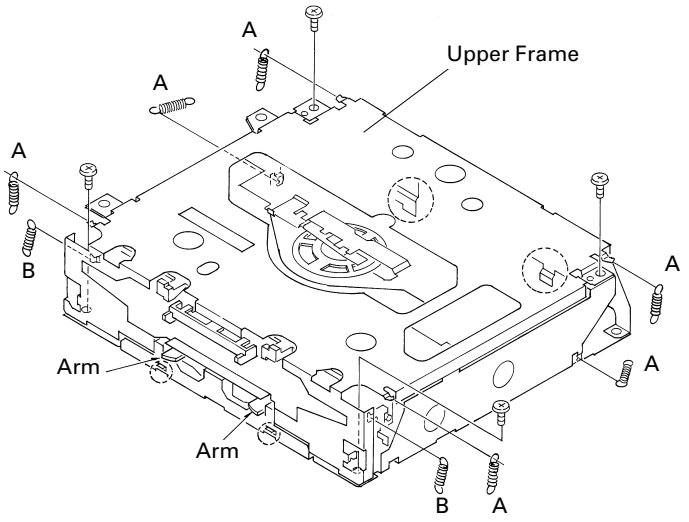
● Removing the Audio amp unit

1. Remove the 4 screws, the 2 connectors and the Holder.
2. Straighten the 5 hooks marked with an arrow, and remove the Audio Amp Unit.



● Removing the Upper Frame

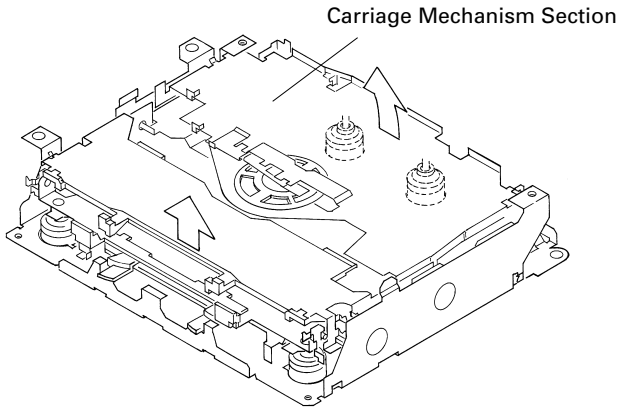
1. Remove six springs A, two springs B and four screws.
2. Remove two tabs situated on rear side of the Upper Frame, remove two Arms on the front side, then remove two tabs on the front side.



● Removing the Carriage Mechanism

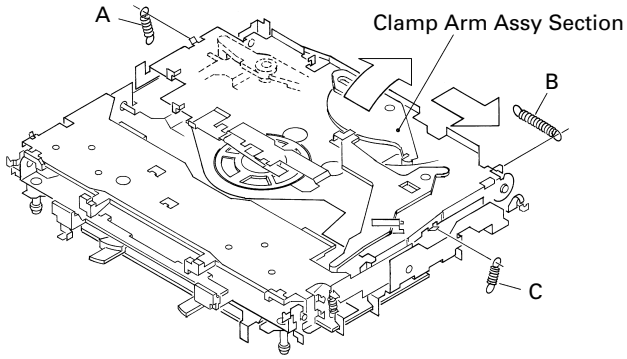
1. Disengage the Carriage Mechanism from the two dampers situated in the front side by driving it up, then disengage and remove the mechanism from the two dampers by driving it up aslant into front side direction.

Note : When assembling the Carriage Mechanism, coat the dampers with alcohol prior to the assembly.



● Removing the Clamp Arm Assy

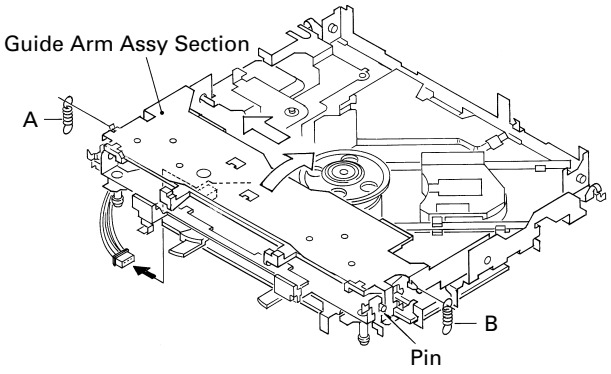
1. Remove a spring A, a B and a spring C.
2. Drive the Clamp Arm Assy up into rear side direction, then disengage the arm from its current position Finally, drive the assembly approximately 45 degrees upward, then slide the assembly toward right side to remove it.



● Removing the Guide Arm Assy

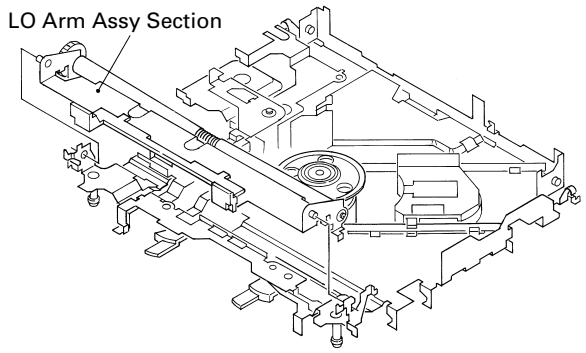
1. Remove a connector, a spring A and B
2. Drive the Guide Arm Assy up aslant into rear side direction, then remove it from a Pin. Finally, drive the assembly approximately 45 degrees upward, then slide the assembly toward left side to remove it.

Note : When assembling the guide arm assembly, route the cord inside the assembly. In this operation, care must be exercised so that cord may be caught by the gear.



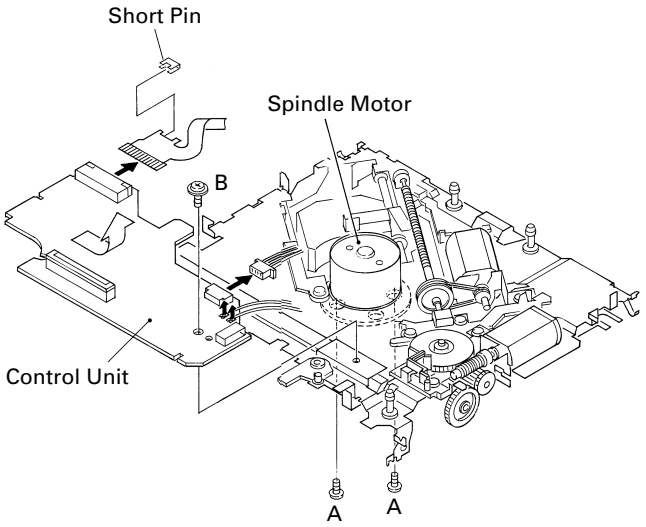
● Removing the LO Arm Assy

1. Remove two Pins to dismount the LO Arm Assy.



● Removing the Control Unit and the Spindle Motor

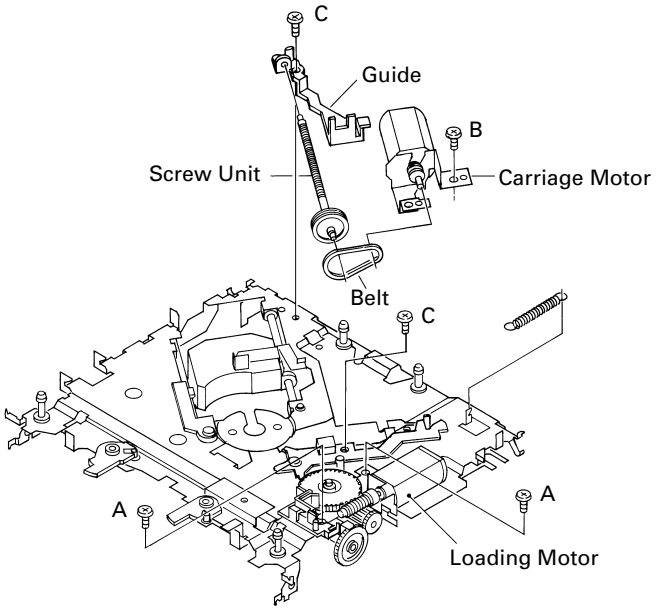
1. Remove from the connector after mounting the Short pin on the flexible PCB of the pickup unit.
2. Remove two soldered joints, then remove two screws A.
3. Remove two connectors and a Screw B.
4. Disengage the Control Unit from two Tabs, then dismount the unit by sliding it toward left.
5. Dismount the Spindle Motor.



● Removing the Loading Motor and Carriage Motor

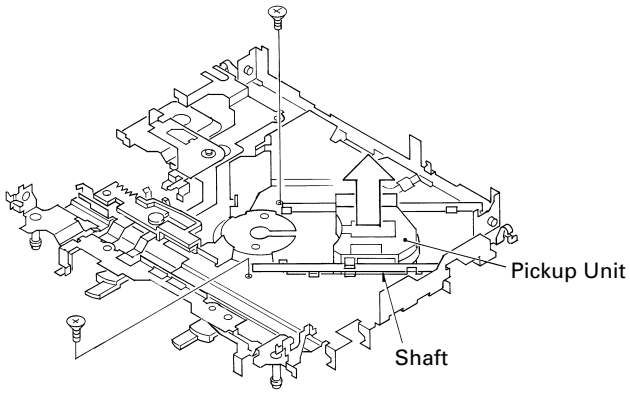
1. Remove the spring and two screws A.
2. Dismount the Loading Motor.
3. Remove the Belt, a screw B, two screws C, a Guide and a Screw Unit.
4. Dismount the Carriage Motor.

Note : When assembling the Belt, use care so that it may not be contaminated by grease.

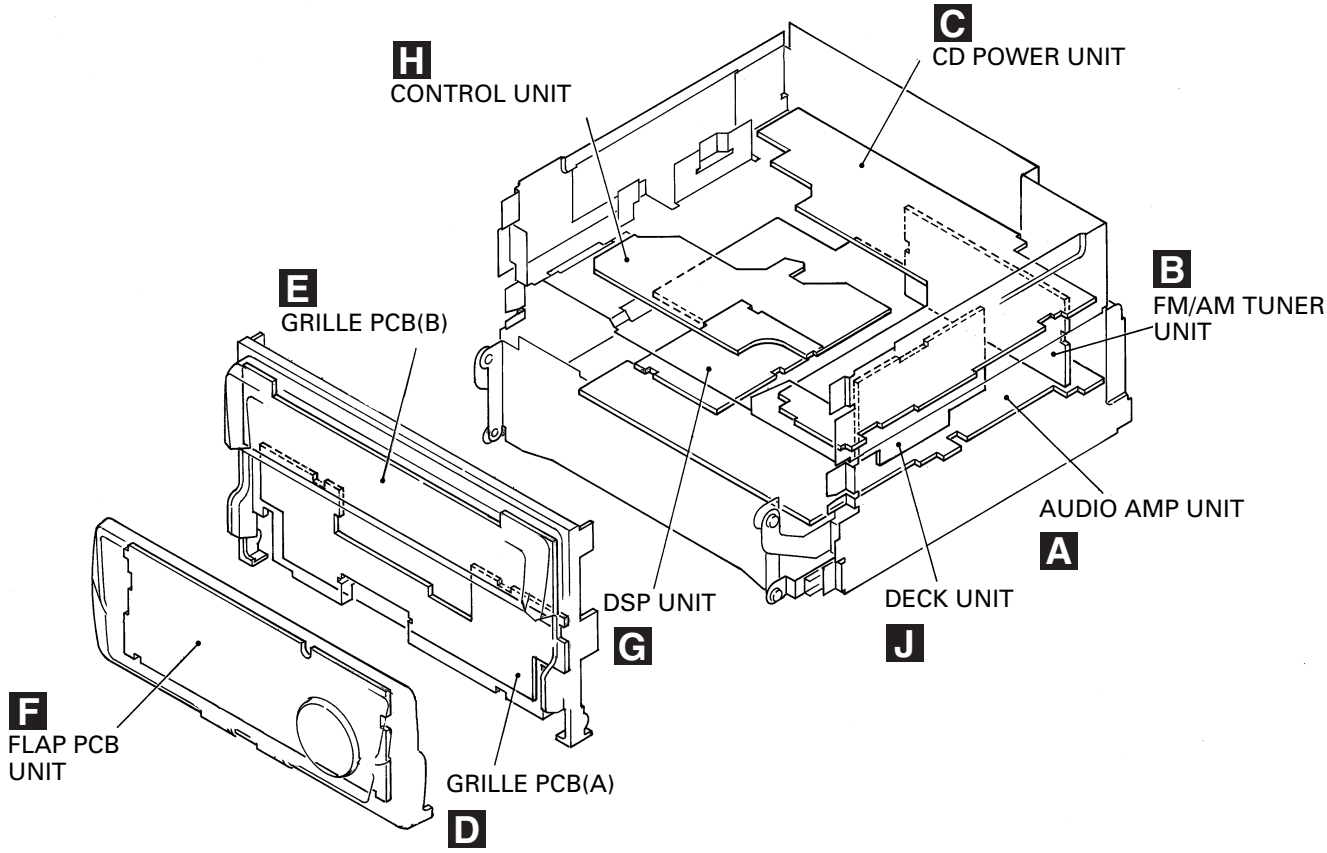


● Removing the Pickup Unit

1. Remove two screws and a Shaft.
2. Dismount the Pickup Unit.



7.1.3 PCB LOCATIONS

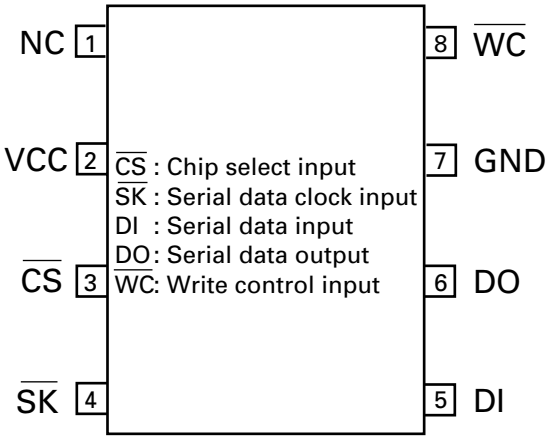


7.2 PARTS

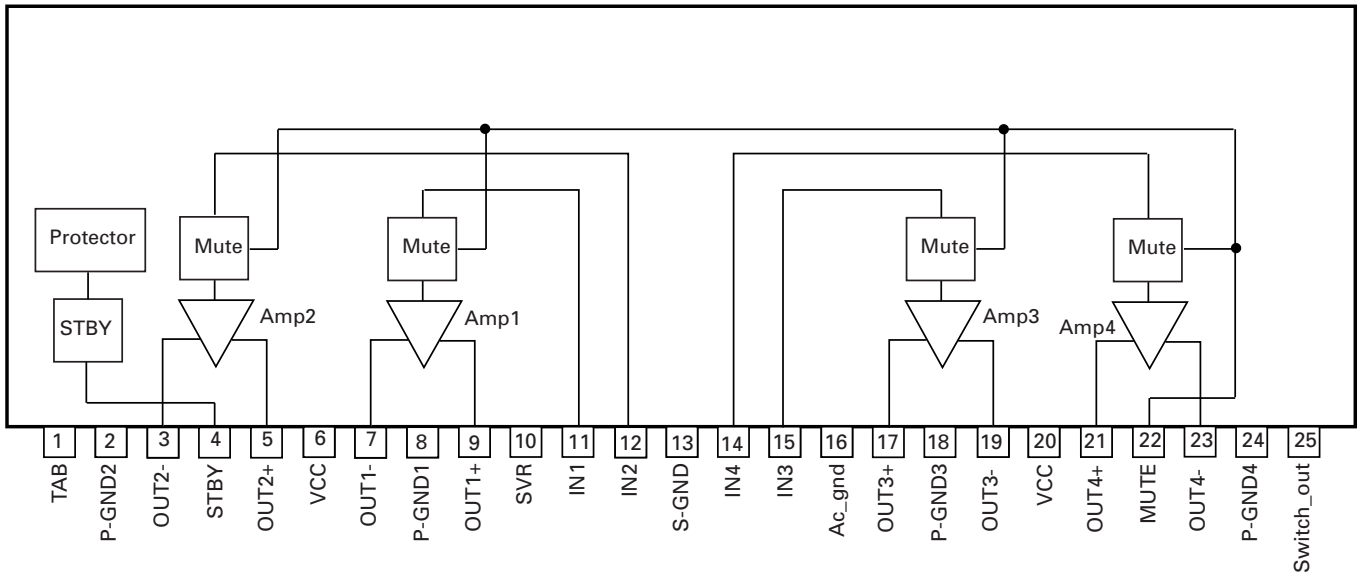
7.2.1 IC

BR9010FV	PD6317A
PAL005A	AK7712AVT
PE5028A	PM0009BM
BA6288FS	PD5510A
TC7W14FU	M5M51016BTP-70LL
GP1S94J	UPD63710GC
S-81250SGUP	PE5011C
SED1526F0A	BA5985FM

BR9010FV



PAL005A

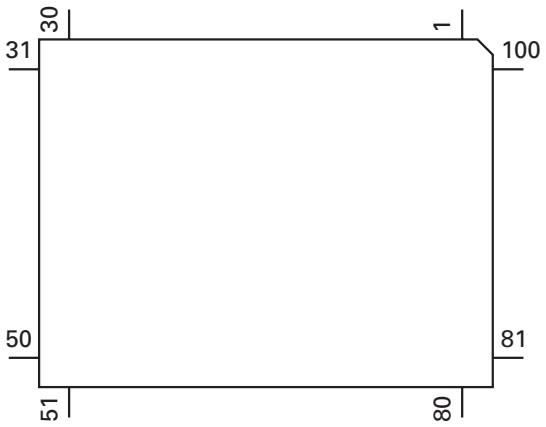


● **Pin Functions (PE5028A)**

Pin No.	Pin Name	I/O	Function and Operation
1	$\overline{\text{SWVDD}}$	O	Power supply output
2	NC		Not used
3	MICSNS	I	Microphone sense input
4	NC		Not used
5	TESTIN	I	Test mode IN/test enable
6	ANTPW	O	Antenna output
7,8	NC		Not used
9	ENCH	I	Encoder pulse input
10	ENCL	I	Encoder pulse input
11	$\overline{\text{RESET}}$	I	Reset input
12	XT2		Not used
13	XT1		GND
14	VSS		GND
15	X2		Crystal oscillator connection pin
16	X1		Crystal oscillator connection pin
17	REGOFF		GND
18	REGC		Not used
19	VDD		Power supply
20	NC		Not used
21	SYSPW	O	System power supply control output
22	FLPPW	O	Flap motor driver power ON/OFF output
23	FLPILM	O	Inside of flap illumination output
24	ILMPW	O	Illumination power supply control output
25	CFLPW	O	CFL power supply output
26	DIMMER	O	DIMMER select output
27	IPPW	O	Power supply control output for IP BUS interface IC
28	ASENBO	O	Slave power supply control output
29	$\overline{\text{SHELL}}$	I	Cassette detect input
30	$\overline{\text{MUTE}}$	O	Mute output
31	ROMDT	I	ROM correction data output
32	ROMCK	O	ROM correction clock output
33	ROMCS	O	ROM correction chip select output
34	$\overline{\text{ANTFIX}}$	O	Antenna diversity fix output
35	LOCL	O	LOC L output
36	LOCH	O	LOC H output
37	TUNPCE2	O	PLL chip enable output
38	SD	I	SD signal input
39	$\overline{\text{ST}}$	I	Stereo input
40	VSS		GND
41	VDD		VDD
42	FLPCLS	O	Flap motor close output
43	FLPOPN	O	Flap motor open output
44	$\overline{\text{FOPNSW}}$	I	Flap open SW sense
45	$\overline{\text{FSTPSW}}$		Not used
46	$\overline{\text{FCLSSW}}$	I	Flap close SW sense
47	FSEN1	I	Photo-interupter pulse input
48	FSEN0	I	Photo-interupter pulse input
49	PLAY	O	MS gain select output
50	NR	O	Dolby NR ON/OFF select output
51	SC1	O	Cassette mechanism sub motor control output
52	SC2	O	Cassette mechanism sub motor control output
53	CM	O	Cassette mechanism capstan motor control output
54	MSIN	I	MS sense
55	DIRO	O	Head F/R select output
56	$\overline{\text{MTLSW}}$	I	Metal sense input
57	LOADSW	I	Tape loading input
58	$\overline{\text{POS}}$	I	Position sense
59	RES	I	Cassette mechanism reverse end sense input

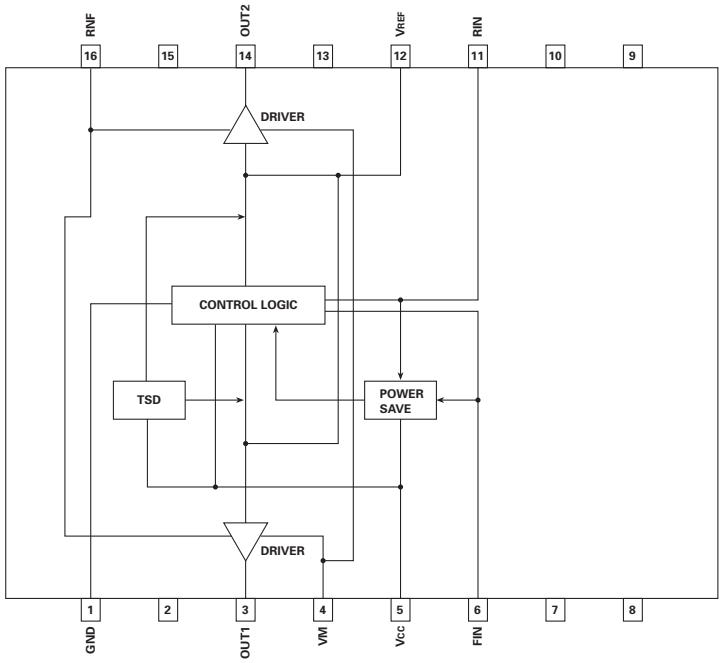
Pin No.	Pin Name	I/O	Function and Operation
60	NES	I	Cassette mechanism forward end sense input
61	$\overline{\text{STBY}}$	O	Drive IC control output
62	PCL	O	Clock adjustment output
63	$\overline{\text{BSRQ}}$1	O	P-BUS service request output
64	$\overline{\text{BSRQ}}$0	O	P-BUS service request output
65	BSCK	I/O	P-BUS serial clock input/output
66	BSI	I	P–BUS serial data input
67	BSO	O	P–BUS serial data output
68	$\overline{\text{BRST}}$	O	P-BUS reset output
69	$\overline{\text{BRXEN}}$	I/O	P-BUS communication input/output
70-72	NC		Not used
73	TEST		GND
74	SL	I	Signal level input from tuner
75-78	SOR0-3	O	Source select output
79	MODEL1	I	Model select input
80	MODEL0	I	Model select input
81	$\overline{\text{ADPW}}$	O	A/D converter power
82	AVDD		VDD
83	AVREF		Reference voltage
84	AVSS		GND
85	RX	I	IP BUS data input
86	TX	O	IP BUS data output
87-89	NC		Not used
90	TELIN	I	Telephone mute input
91	$\overline{\text{ISENS}}$	I	Illumination sense input
92	$\overline{\text{ASENS}}$	I	ACC power sense input
93	$\overline{\text{BSENS}}$	I	Back up power sense input
94	TUNPDI	I	PLL IC data input
95	RXD	I	Display IC data input
96	TXD	O	Display IC data output
97	TUNPCK	O	PLL IC clock
98	TUNPDO	O	PLL IC data output
99	TUNPCE	O	PLL IC chip enable
100	PEE	O	Beep tone output

*PE5028A

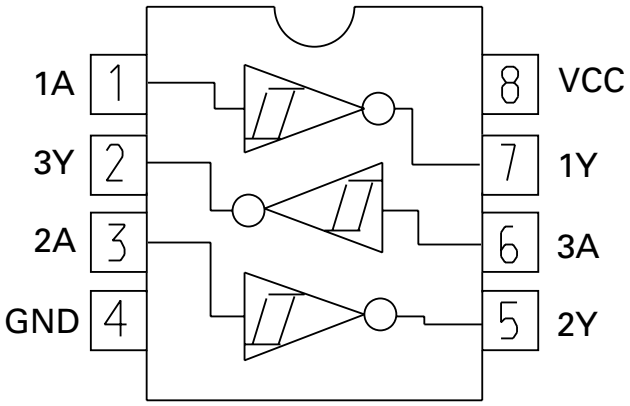


IC's marked by* are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

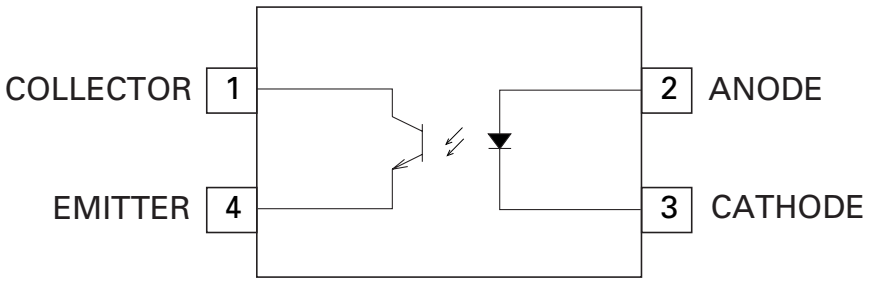
BA6288FS



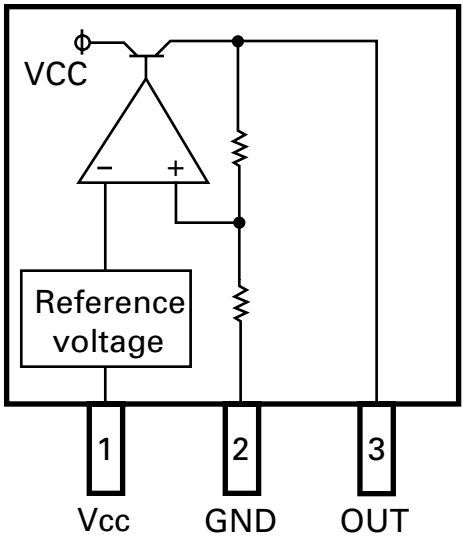
TC7W14FU



GP1S94J



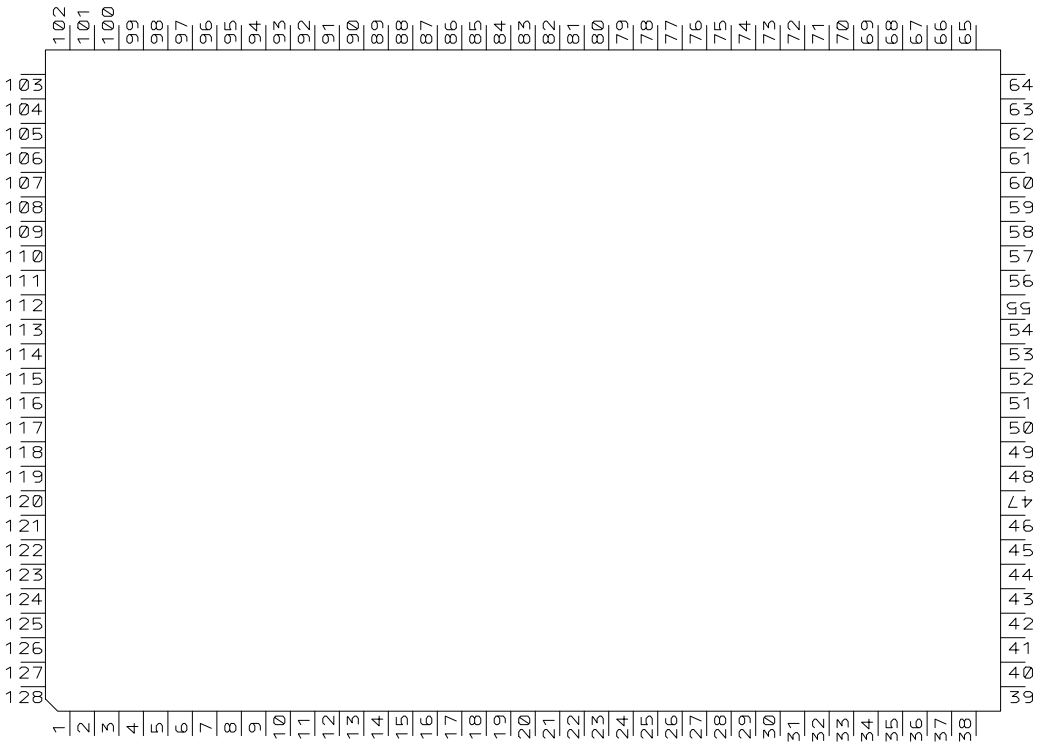
S-81250SGUP



● Pin Functions (SED1526F0A)

Pin No.	Pin Name	I/O	Function and Operation
1-5	V1-V5		Multilevel power supply for driving LCD
6	VR	I	Voltage adjustment
7	VDD		+5V power supply
8	VOUT	O	Ascending voltage output
9	CAP2-	O	Ascending voltage capacitor connection
10	CAP2+	O	Not used
11	CAP1-	O	Ascending voltage capacitor connection
12	CAP2+	O	Ascending voltage capacitor connection
13	VSS		GND
14	M/S	I	IC master/slave operation select
15	SR2	I	MPU interface select, pararel/serial data inpur select and reset input
16	SR1	I	MPU interface select, pararel/serial data inpur select and reset input
17	$\overline{WR}$	I	MPU WR signal connection
18	$\overline{RD}$	I	MPU RD signal connection
19	CS2	I	Chip select signal
20	CS1	I	Chip select signal
21	A0	I	Data/command discrimination
22	FR	O	Not used
23	CL	O	Not used
24-31	D0-D7	I/O	Serial data bus
32-39	COM0-7	O	Output for LCD common driving
40-48	NC		Not used
49-110	SEG0-61	O	Output for driving segment of LCD
111-128	NC		Not used

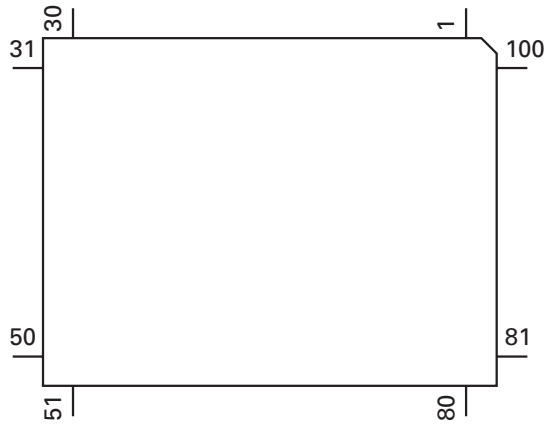
SED1526F0A



● Pin Functions (PD6317A)

Pin No.	Pin Name	I/O	Function and Operation
1-10	NC		Open
11	VSS		GND
12	$\overline{WR}$	O	Write strobe
13-18	NC		Open
19	KEYDT	O	Key data output
20	DPDT	I	Display data input
21	SPCLK	O	Spectrum analyzer clock
22	NC		Open
23	VDD		VDD
24	SPDIN	I	Spectrum analyzer data input
25	$\overline{MON}$/STE	O	Spectrum analyzer mode
26	SPRQ	O	Spectrum analyzer data output request
27	C		Regulator terminal
28-33	NC		Open
34	AVCC		VDD
35	AVRH		VDD
36	AVRL		GND
37	AVSS		GND
38,39	NC		Open
40,41	KDT0,1	I	Key return input
42	VSS		GND
43-45	KDT2-4	I	Key return input
46	NC		Open
47	REMIN	I	Remote control signal input
48	NC		Open
49,50	MD0,1		VDD
51	MD2		GND
52	HSTX	I	Stand-by input
53-76	NC		Open
77	RST		Open
78	CE2	I	Chip enable input
79	CE1		Open
80	LCDRST	O	Reset output
81	VSS		GND
82	XO	O	Crystal oscillator connection pin
83	XI	I	Crystal oscillator connection pin
84	VDD		Power supply
85-92	AD0-7	O	Data bus output
93	A0	O	Address output
94-100	NC		Open

*PD6317A

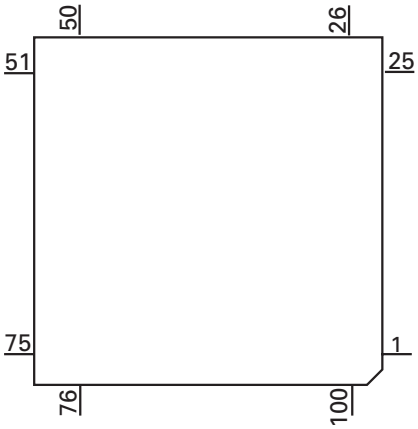


● **Pin Functions (AK7712AVT)**

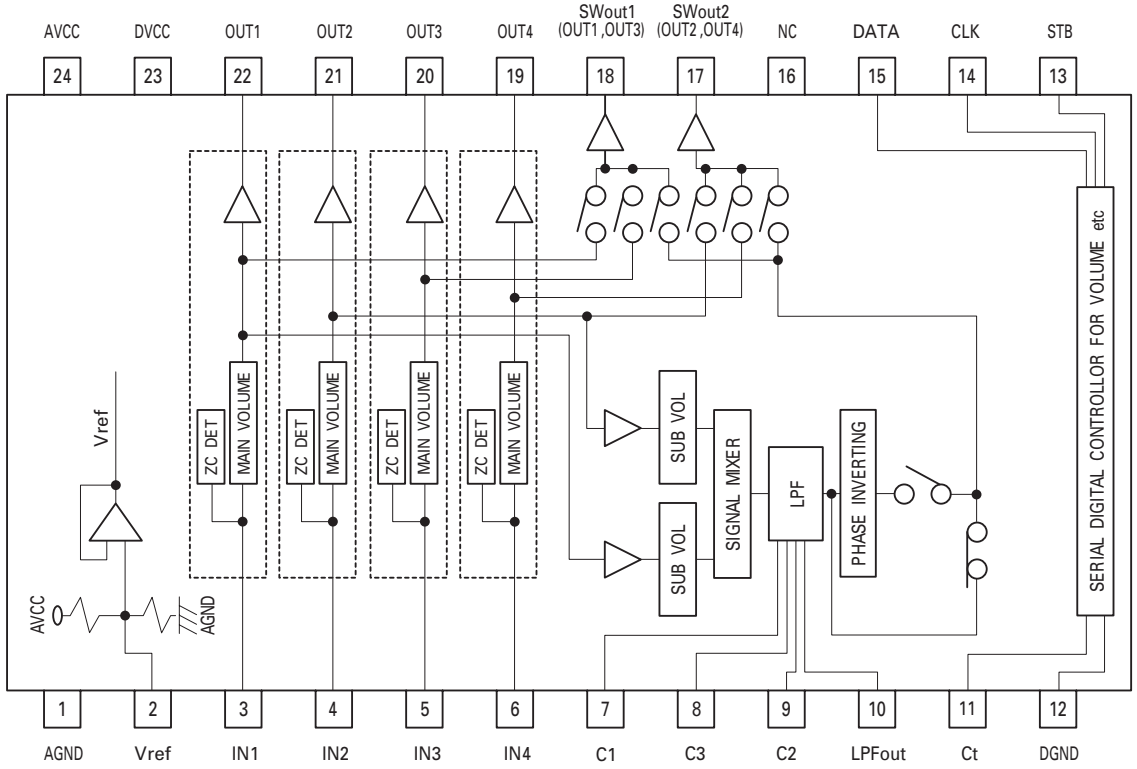
Pin No.	Pin Name	I/O	Function and Operation
1	TSTI1	I	Test input 1
2	OPCL	I	ADC,DAC connection select
3	$\overline{\text{PDAD}}$	I	AD reset control
4	$\overline{\text{PDDA}}$	I	DA reset control
5	$\overline{\text{PD}}$	I	Power down
6	$\overline{\text{RST}}$	I	Reset input
7	TSTIO1	I/O	Test input/output 1
8	TSTIO2	I/O	Test input/output 2
9	TSTIO3	I/O	Test input/output 3
10,11	DVB		Digital PCB power supply
12	SDIN2	I	Serial data input 2
13	SDAD	O	Serial data output 2
14	SDOUT2	O	Serial data output 3
15	SDDA	I	Serial data input 3
16	SDDA2	I	Serial data input 4
17	SDOUT3	O	Serial data output 4
18	SDOUT1	O	Serial data output 1
19	SDIN1	I	Serial data input 1
20	SMODE	I	Interface clock select
21	BCLK	I/O	Clock input/output for serial data input signal input/output
22	LRCK	I/O	L/R channel Identification Signal input/output
23	CLKO	O	Master clock output
24	DVDD		Digital power supply
25	DVSS		Digital GND
26	XTI	I	Clock input
27	XTO	O	Oscillator output
28	TSTI2	I	CLKO output control
29	$\overline{\text{CS}}$	I	Chip select input for micro-computer interface
30	$\overline{\text{WRQ}}$	I	Command register reset input for micro-computer interface
31	DVSS		Digital GND
32	DVDD		Digital power supply
33	SCLK	I	Serial data input clock input for micro-computer interface
34	SI	I	Serial data input for micro-computer interface
35	WRDY	O	Data write ready output for micro-computer interface
36	DRDY	O	Output data ready output for micro-computer interface
37	SO	O	Serial data output for micro-computer interface
38	$\overline{\text{CASRF}}$	O	External DRAM CAS/pseudo SRAM refresh
39	$\overline{\text{RASCE}}$	O	External DRAM RAS/pseudo SRAM-ce
40	$\overline{\text{WE}}$	O	External SRAM/pseudo SRAM/DRAM write signal output
41-48	A16-A9	O	External RAM address output
49	DVSS		Digital GND
50	DVDD		Digital power supply
51-59	A8-A0	O	External RAM address output
60	$\overline{\text{OE}}$	O	External SRAM/pseudo SRAM/DRAM output enable signal output
61-68	IO0-IO7	I/O	External RAM data input/output
69	DVSS		Digital GND
70	DVDD		Digital power supply
71	DZFSET	I	Zero position detect setup
72	DVSS		Digital GND
73	DVDD		Digital power supply
74,75	DVB		Digital PCB power supply
76	DZF2	O	Zero input detect (DAC2)
77	DZF1	O	Zero input detect (DAC1)
78	NC		Not used
79	AVB		Analog PCB power supply
80	AOUTR2	O	DAC2 Rch analog output 2
81	AOUTL2	O	DAC2 Lch analog output 2
82	NC		Not used

Pin No.	Pin Name	I/O	Function and Operation
83	AOUTR1	O	DAC1 Rch analog output 1
84	AOUTL1	O	DAC1 Lch analog output 1
85	VRDAL	I	DAC reference voltage input
86	AVSS		Analog GND
87	AVDD		Analog power supply
88	VRDAH	I	DAC reference voltage input
89	NC		Not used
90	AINR-	I	ADC Rch analog inverted input
91	AINR+	I	ADC Rch analog input
92	AINL-	I	ADC Lch analog inverted input
93	AINL+	I	ADC Lch analog input
94	VCOM	O	Common voltage
95	VRADL	I	ADC reference voltage input
96	AVSS		Analog GND
97	AVDD		Analog power supply
98	VRADH	I	ADC reference voltage input
99	AVB		Analog PCB power supply
100	NC		Not used

AK7712AVT



PM0009BM

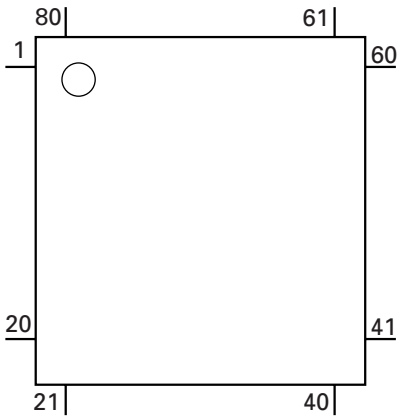


● **Pin Functions (PD5510A)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	SPCK	I		Spectrum analyzer clock input
2	NC	O	C	Not used
3	VST	O	C	Electronic volume strobe output
4	VDT	O	C	Electronic volume data output
5	VCK	O	C	Electronic volume clock output
6	CNVSS	I		Connect to Vss
7	MCKRQ	I	C	Connect to Vss
8	EMPIN	O	C	Connect to Vss
9	$\overline{\text{RESET}}$	I		Micro-computer hard reset input
10	XOUT	O		System clock output
11	VSS	I		GND
12	XIN	I		System clock input
13	VCC	I		Micro-computer power supply 5V
14	$\overline{\text{NMI}}$	I		Connect to Vcc
15	BMUTEIN	I		Connect to Vss
16	SPRQ	I		Spectrum analyzer data output request
17	$\overline{\text{BRST}}$	I		P-Bus reset input
18-23	NC			Not used
24	DSPOUT	O	C	DSP serial data output
25	DSPIN	I		DSP serial data input
26	DSPCK	O	C	DSP serial clock output
27	NC			Not used
28	BSO	O	C	P-BUS data output
29	BSI	I		P-BUS data input
30	BSCK	I/O	C	P-BUS serial clock input/output
31	NC			Not used
32	$\overline{\text{BSRQ}}$	I/O	C	Service request input
33	$\overline{\text{BRXEN}}$	I/O	C	Reception enable input
34	ADSEL	I		Signal/AEQ microphone input select
35	TYPE	I		Type A,B detect
36	MICSENS	I		AEQ microphone connect information
37	IFHIZ	I		DSP port Hiz set
38	AQTEST	I		AEQ mode
39	$\overline{\text{TESTIN}}$	I		test program start/enable
40	DSPPW	O	C	DSP power supply switching
41	MUTERQ	O	C	Mute output
42	NGO			Not used
43	SWMUTE	O		Sub woofer mute output
44	FMUTE	O		Front/rear mute output
45-47	NC			Not used
48	PLLLOC			Connect to VSS
49-60	NC			Not used
51	VOICE	I	C	Connect to GND
52-58	NC	O	C	Not used
61	AKPD	O	C	AK7712 power down
62	AKRST	O	C	AK7712 reset
63	AKJMP			Not used
64	$\overline{\text{DSPCS1}}$	O	C	TC9331 chip select
65	$\overline{\text{AKWRQ}}$	O	C	AK7712 data output request
66	$\overline{\text{DSPACK}}$	I		DSP data write ready
67	AKRDY	I		AK7712 data ready
68	$\overline{\text{DSPRST}}$	I		DSP reset control
69	$\overline{\text{DSPCS2}}$	O	C	Ak7712 chip select
70	DSPCD	O	C	DSP command data switching
71-73	NC			Not used

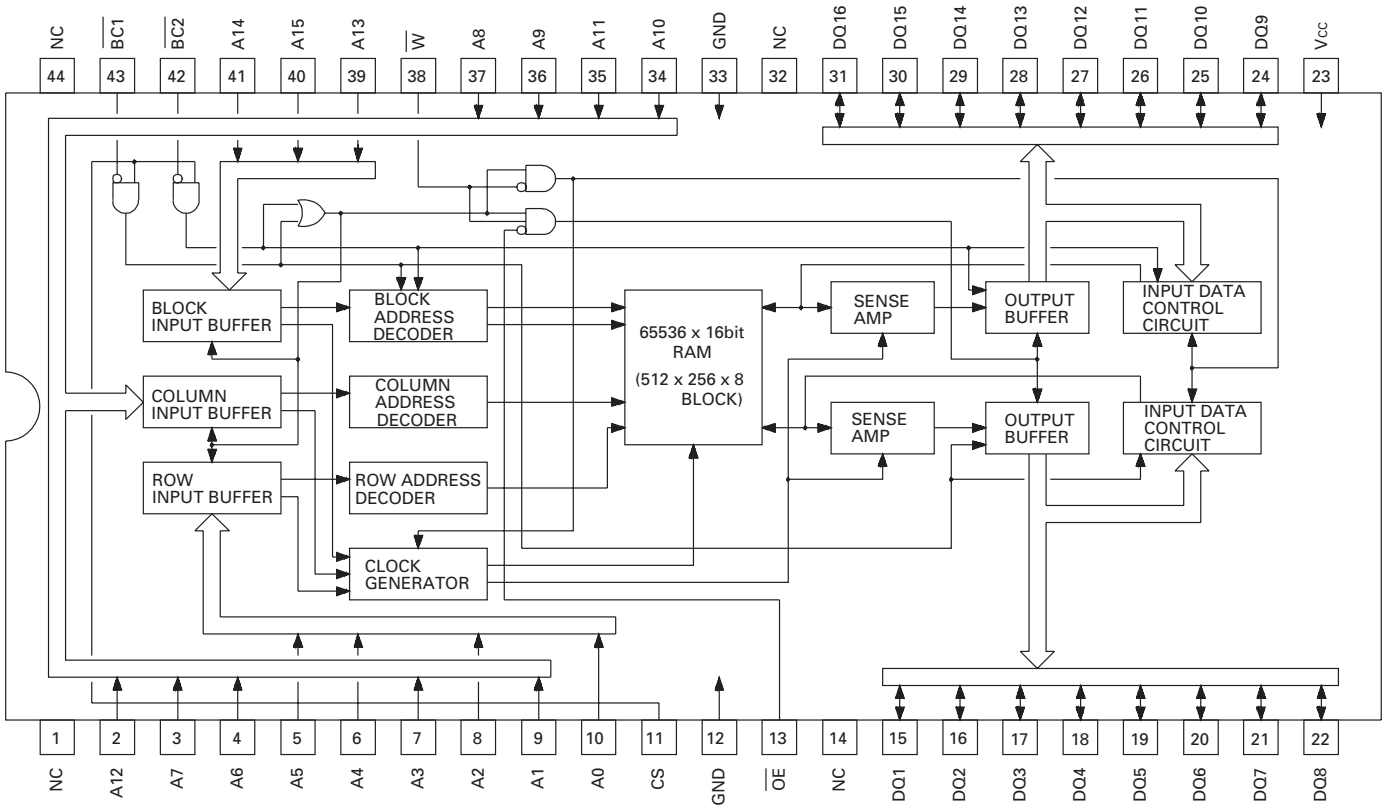
Pin No.	Pin Name	I/O	Format	Function and Operation
74	NOISE	I		Connect Vss
75	AVSS	I		Connect Vss
76	NC			Not used
77	VREF	I		AD select reference voltage input
78	AVCC	I		Analogue power supply
79	MO/ST	I		Spectrum analyzer monaural/stereo switching
80	SPDT	O	C	Spectrum analyzer data output

*PD5510A



Format	Meaning
C	C MOS

M5M51016BTP-70LL

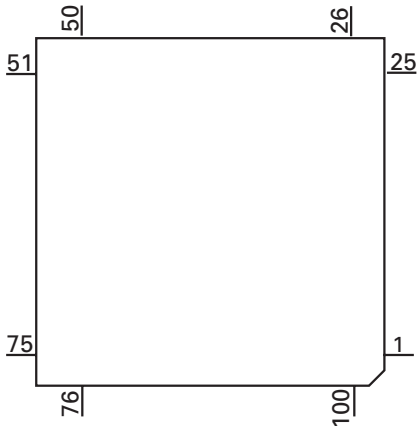


● **Pin Functions (UPD63710GC)**

Pin No.	Pin Name	I/O	Function and Operation
1	GND		Logic circuit GND
2	HOLD	I/O	Defect detection output
3	MIRR	I/O	MIRR output
4	FOK	O	RFOK signal output
5	$\overline{\text{RST}}$	I	Reset signal input
6	A0	I	Command/parameter identification signal input
7	$\overline{\text{STB}}$	I	Data strobe signal input
8	$\overline{\text{SCK}}$	I	Clock signal input for serial data input/output
9	SO	O	Serial data and status signal output
10	SI	I	Serial data input
11	VDD		Positive power supply terminal to logic circuit
12	DA.VDD		Positive power supply terminal to D/A converter
13	NC		Not used
14, 15	DA.GND		D/A converter GND
16	NC		Not used
17	DA.VDD		Positive power supply terminal to D/A converter
18	R+	O	Right channel audio data output
19	R-	O	Right channel audio data output
20	L-	O	Left channel audio data output
21	L+	O	Left channel audio data output
22	X.VDD		Positive power supply terminal to crystal oscillation circuit
23	$\overline{\text{XTAL}}$	O	Crystal oscillator connect pin
24	XTAL	I	Crystal oscillator connect pin
25	X.GND		Crystal oscillation circuit GND
26	VDD		Positive power supply terminal to logic circuit
27	EMPH	O	Output pin for the pre-emphasis data in the sub-Q code
28	FLAG	O	Flag output pin to indicate that audio data currently being output consists of noncorrectable data
29	DIN	I	Serial data input to internal DAC
30	DOUT	O	Serial audio data output
31	SCKIN	I	Serial clock input to internal DAC
32	SCKO	O	Audio data that is output from DOUT changes at rising edge of this clock
33	LRCKIN	I	LRCK signal input to internal DAC
34	LRCK	O	Signals to distinguish the right and left channels of the audio data output from DOUT
35	WDCK	O	Output double the frequency of LRCK
36	TX	O	Digital audio interface data output
37	GND		Logic circuit GND
38	C16M	O	Oscillator clock buffering output
39	LIMIT	I	Status of the pin is output at Bit 5 of the status output
40	VDD		Positive power supply terminal to logic circuit
41	LOCK	O	EFM synchronous detection signal
42	RFCK	O	Frame synchronous signal of XTAL-system
43	WFCK	O	Frame synchronous signal of PLL-system
44	PLCK	O	Monitor pin of bit clock
45	GND		Logic circuit GND
46	C1D1	O	Output pin for indicating the C1 error correction results
47	C1D2	O	Output pin for indicating the C1 error correction results
48	C2D1	O	Output pin for indicating the C2 error correction results
49	C2D2	O	Output pin for indicating the C2 error correction results
50	C2D3	O	Output pin for indicating the C2 error correction results
51	VDD		Positive power supply terminal to logic circuit
52	PACK	O	CD-TEXT PACK synchronous signal
53	TSO	O	CD-TEXT data serial output
54	TSI	I	CD-TEXT control parameter serial input
55	$\overline{\text{TSCK}}$	I	CD-TEXT serial clock input
56	TSTB	I	CD-TEXT parameter strobe signal input
57	GND		Logic circuit GND
58	TEST	I	Test pin

Pin No.	Pin Name	I/O	Function and Operation
59	ATEST	I/O	Test pin
60	RFMODE	I	Use/not use select for internal RF amplifier
61	A.GND		Analog circuit GND
62	FD	O	Focus drive output
63	TD	O	Tracking drive output
64	SD	O	Sled drive output
65	MD	O	Spindle drive output
66	DACO	O	DAC output for adjustment
67	FBAL	O	DAC output for adjustment
68	TBAL	O	DAC output for adjustment
69	TEVCA	O	DAC output for adjustment
70	A.VDD		Power supply terminal to analog circuit
71	EFM	O	EFM signal output
72	ASY	I	EFM comparator reference voltage input
73	C3T		3T detection capacitor additional pin
74	RFI	I	RF signal input for EFM data regulation
75	AGCO	O	RF signal output of after gain adjustment
76	AGCI	I	RF-AGC amplifier input
77	RFO	O	RF summing amplifier output
78	EQ2		RF amplifier equalizer parts additional pin
79	EQ1		RF amplifier equalizer parts additional pin
80	RF-	I	RF summing amplifier inverted input
81	A.GND		Analog circuit GND
82	A	I	Photo detector A input
83	C	I	Photo detector C input
84	B	I	Photo detector B input
85	D	I	Photo detector D input
86	F	I	Photo detector F input
87	E	I	Photo detector E input
88	A.VDD		Positive power supply terminal to analog circuit
89	REFOUT	O	Reference electric potential output
90	FE-	I	Focus error amplifier inverted input
91	FEO	I/O	Focus error amplifier output
92	TE-	I	Tracking error amplifier inverted input
93	TEO	I/O	Tracking error amplifier output
94	TE2	I/O	Tracking error output of after amplification
95	TEC	I	Tracking comparator input
96	A.GND		Analog circuit GND
97	PD	I	PD detection signal input for LD output monitor
98	LD	O	LD control current output
99	PN	I	APC circuit control polarity set pin
100	A.VDD		Positive power supply terminal to analog circuit

*UPD63710GC

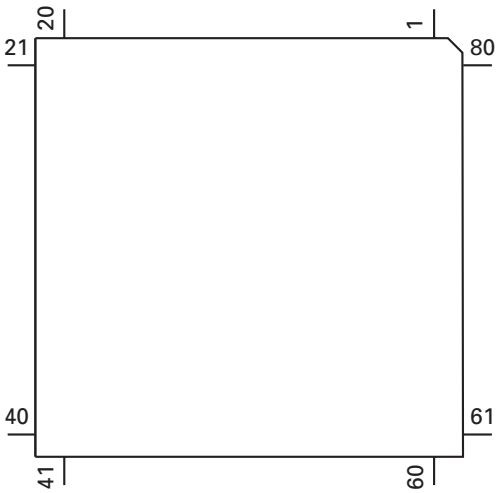


● **Pin Functions(PE5011C)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	EJTSNS			Disc eject position sense input
2	DSCSNS			Disc insert position sense input
3	VDSENS			VD power supply short sense input
4	TEMP			Temperature sense input
5-8	NC			Not used VSS
9	AVREF			A/D reference voltage input
10	$\overline{\text{RESET}}$	I		System reset input
11	XT1	I		VDD
12	XT2			Open
13	IC(VPP)			VSS
14	X1	I		Main clock radiator(8.38MHz)connection
15	X2			Main clock radiator(8.38MHz)connection
16	VDD			Power supply(+5V)
17	VSS			GND
18	$\overline{\text{XSCK}}$	O	C	CD LSI serial clock output
19	XSO	O	C	CD LSI serial data output
20	XSI	I		CD LSI serial data input
21	$\overline{\text{BRST}}$			P-Bus reset input
22	$\overline{\text{PACK}}$			CD-TEXT pack sync signal input
23, 24	NC			Not used Open
25	XA0	O	C	CD LSI data discrimination control signal output
26	$\overline{\text{XSTB}}$	O	C	CD LSI strobe output
27	$\overline{\text{XRST}}$	O	C	CD LSI reset output
28	FOK	I		Focus OK input
29	MIRR	I		Specular surface detection input
30	LOCK	I		Spindle lock input
31	CD5VON	O	C	CD +5V power supply control output
32, 33	NC			Not used Open
34	EMPH	O	C	Emphasis information output
35-44	NC			Not used Open
45	VSS			GND
46	VDD			Power supply(+5V)
47	$\overline{\text{ADENA}}$	O	C	A/D reference voltage supply control output
48	VDCONT	O	C	VD power supply control output
49	NC			Not used Open
50	$\overline{\text{CSENS}}$	I		Flap close sense input
51	BRXEN	I/O	/C	Input/output by which P-Bus can be received
52	$\overline{\text{BSRQ}}$	O	C	P-Bus polling request output
53, 54	NC			Not used Open
55	CONT	O	C	Servo driver power supply control output
56	CDMUTE	O	C	CD mute control output
57	CDEJET	O	C	Load/Eject motor Eject control output
58	CDLOAD	O	C	Load/Eject motor Load control output
59	BMUTE	O	C	Bus mute output
60	$\overline{\text{CLAMP}}$	I		Disc clamp input
61, 62	NC			Not used Open
63-66	NC			Not used VDD or VSS
67	TXARI	I		Tx output set selection input
68	$\overline{\text{FSCK}}$	O	C	Flash writing clock input(Open)
69	FTXD	O	C	Flash writing data output(Open)
70	FRXD	O	C	Flash writing data input(Open)
71	$\overline{\text{BSCK}}$	I/O	/C	P-Bus serial clock input/output
72	BDATA	I/O	/C	P-Bus serial data input/output
73	$\overline{\text{TESTIN}}$	I		Test program start input
74	NC			Not used Open
75	TSTB	O	C	CD-TEXT strobe output
76	NC			Not used Open

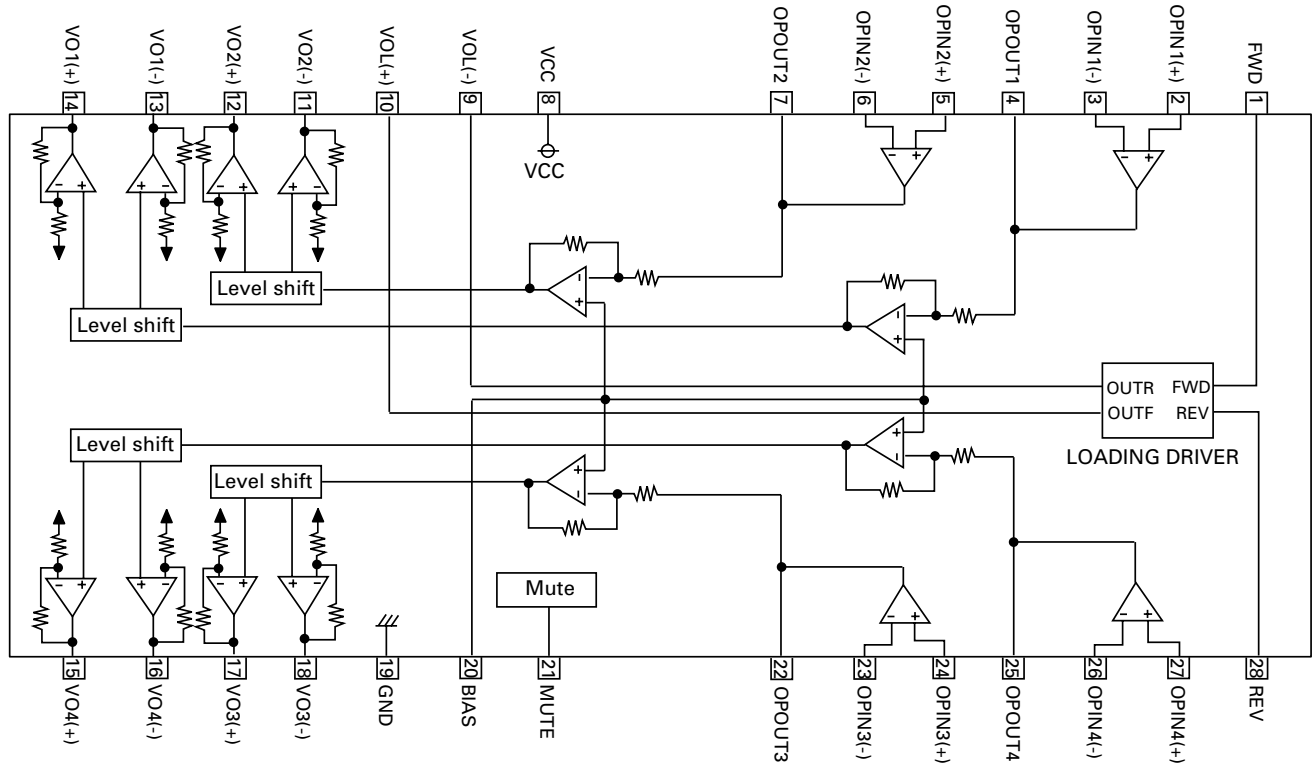
Pin No.	Pin Name	I/O	Format	Function and Operation
77	$\overline{\text{TSCK}}$	O	C	CD-TEXT serial clock output
78	TSO	O	C	CD-TEXT serial data output
79	TSI	I		CD-TEXT serial data input
80	AVSS			A/D GND

*PE5011C



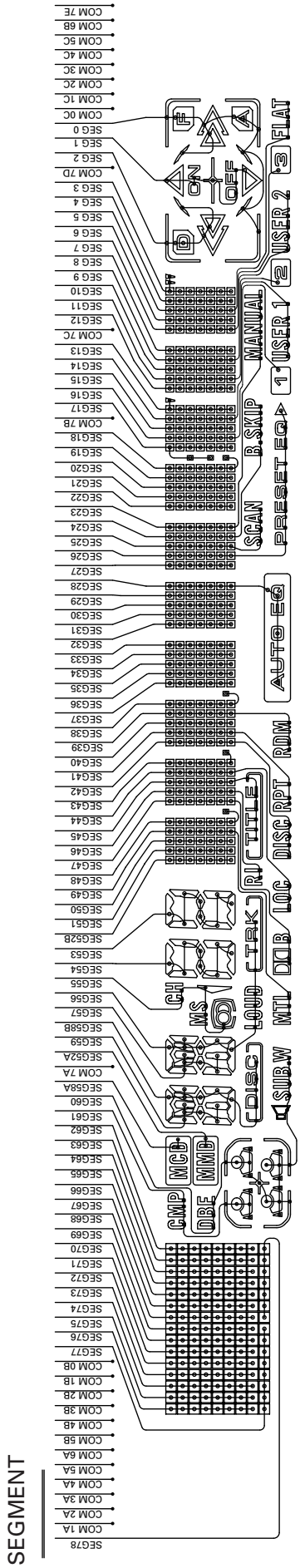
Format	Meaning
C	C MOS

BA5985FM



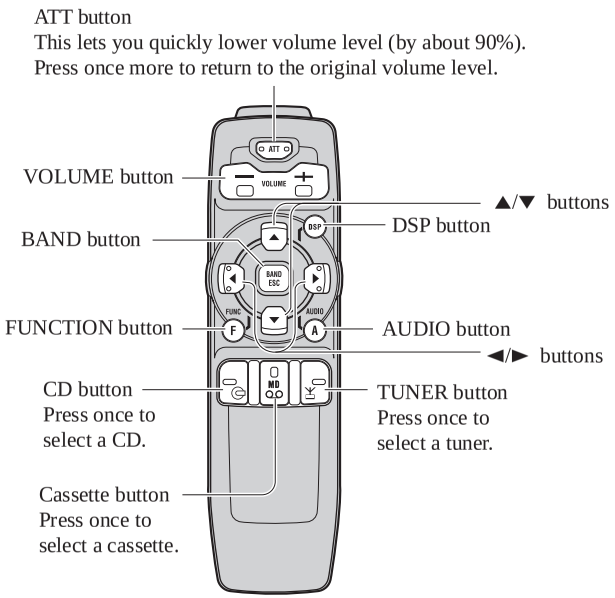
7.2.2 DISPLAY

● CAW1552

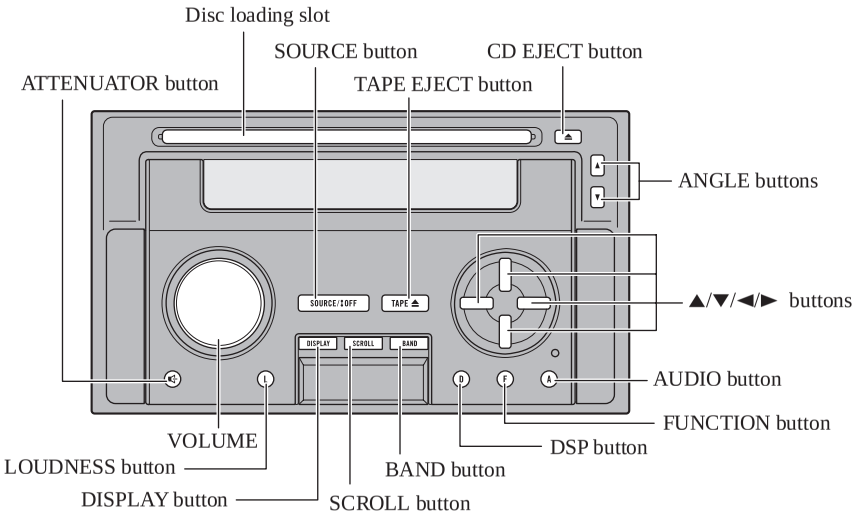


Remote Controller

A remote controller that enables remote operation of the head unit is supplied. Operation is the same as when using buttons on the head unit.

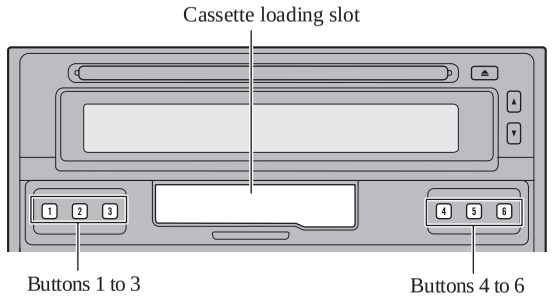


Head Unit (Close)



Head Unit (Open)

Operate buttons 1 to 6 after opening the front panel.
Refer to page 10 for details on how to open the front panel.

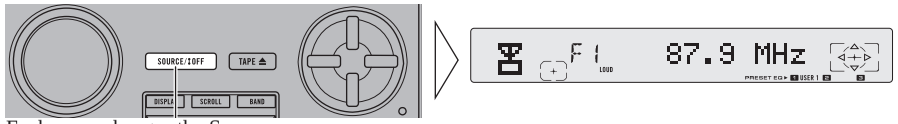


To Listen to Music

The following explains the initial operations required before you can listen to music.

Note:
- Loading a disc in this product.
- Loading a cassette tape in this product.

1. Select the desired source (e.g. Tuner).



Each press changes the Source ...

■ Head Unit

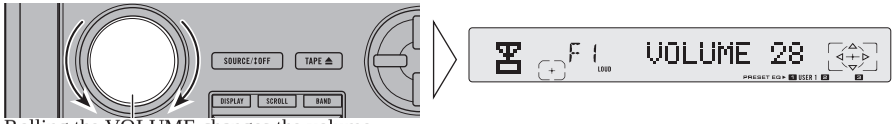
Each press of the SOURCE button selects the desired source in the following order:
Built-in CD player → Tuner → Cassette player → Multi-CD player → External Unit → AUX

■ Remote Controller

Each press of the button selects the desired source in the following order:
CD button : Built-in CD player → Multi-CD player → Sources OFF
Cassette button : Cassette player → AUX → Sources OFF
TUNER button : Tuner → Sources OFF

Note:
- External Unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this product. Only one External Unit can be controlled by this product.
- In the following cases, the sound source will not change:
  * When this product corresponding to each source is not connected to this product.
  * No disc is set in this product.
  * No tape is set in this product.
  * No magazine is set in the Multi-CD player.
  * AUX (external input) is set to OFF.
- When this product's blue lead is connected to the car's Auto-antenna relay control terminal, the car's Auto-antenna extends when this product's source is selected the tuner. To retract the antenna, switch the sources other than tuner.

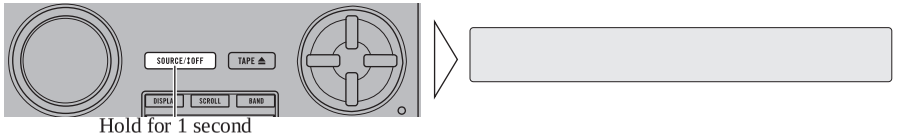
2. Raise or lower the volume.



Rolling the VOLUME changes the volume level.

Note:
- Roll clockwise if you raise the volume level.
- Roll counterclockwise if you lower the volume level.

3. Turn the source OFF.

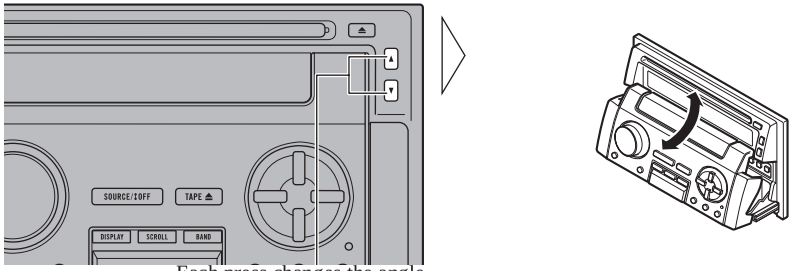


Hold for 1 second

Setting the Display Angle

You can adjust front panel angle for easier operation. Operate buttons 1 to 6 after opening the front panel.

- **Select the desired angle.**



Each press changes the angle.

⚠ WARNING:
- Do not use with the front panel left open. If you do leave it open, it may result in injury in the event of an accident.
- Be careful not to catch your finger in the front panel when it is opening or closing.

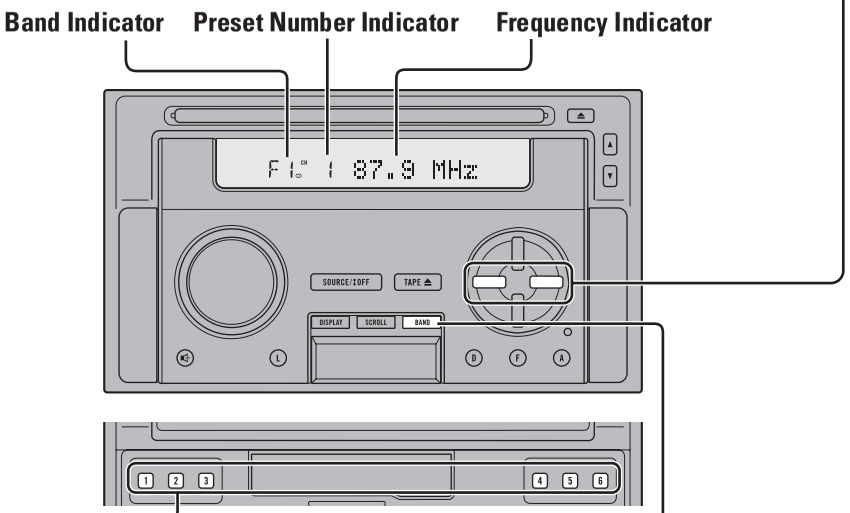
Basic Operation of Tuner

Manual and Seek Tuning

- **You can select the tuning method by changing the length of time you press the ◄/► button.**

Manual Tuning (step by step)	0.5 seconds or less
Seek Tuning	0.5 seconds or more

Note:
- If you continue pressing the button for longer than 0.5 seconds, you can skip broadcasting stations. Seek Tuning starts as soon as you release the button.
- Stereo indicator "◯◯" lights when a stereo station is selected.



- **You can memorize broadcast stations in buttons 1 through 6 for easy, one-touch station recall.**

Preset station recall	2 seconds or less
Broadcast station preset memory	2 seconds or more

Note:
- Up to 18 FM stations (6 in F1 (FM1), F2 (FM2) and F3 (FM3)) and 6 AM stations can be stored in memory.
- You can also use the ▲ or ▼ buttons to recall broadcast stations memorized in buttons 1 through 6.

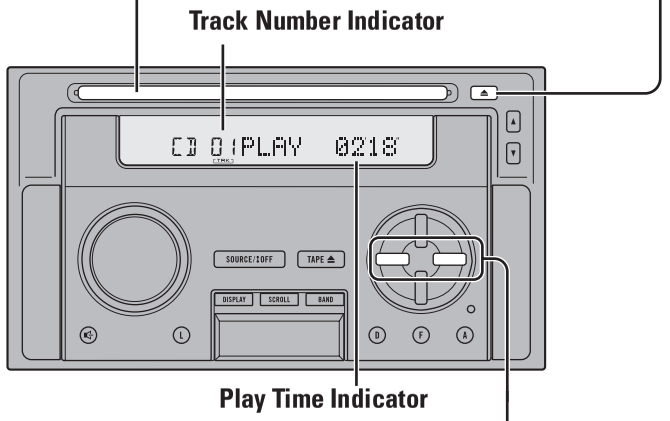
Basic Operation of Built-in CD Player

Eject

Note:
- The CD function can be turned ON/OFF with the disc remaining in this product.
- A disc left partially inserted after ejection may incur damage or fall out.

Disc Loading Slot

The Built-in CD player plays one standard 12 cm or 8 cm (single) CD at a time. Do not use an adapter when playing 8 cm CD.



Track Search and Fast Forward/Reverse

- **You can select between Track Search or Fast forward/Reverse by pressing the ◄/► button for a different length of time.**

Track Search	0.5 seconds or less
Fast forward/Reverse	Continue pressing

Note:
- If a disc cannot be inserted fully or playback fails, make sure the recorded side is down. Push the CD EJECT button and check the disc for damage before reinserting it.
- If a CD is inserted with the recorded side up, it will be ejected automatically after a few moments.
- If the Built-in CD player cannot operate properly, an error message (such as "ERROR-14") appears on the display.

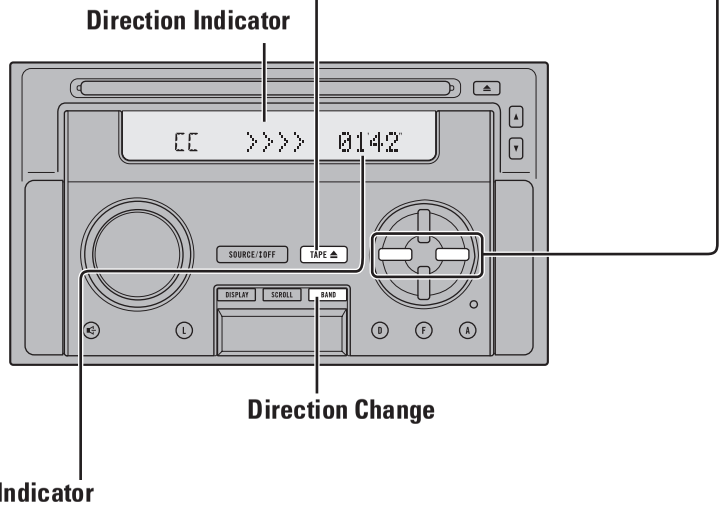
Basic Operation of Cassette Player

Note:
- Be sure to close the front panel after loading or ejecting a cassette.

Open/Eject

Press the TAPE EJECT button, and the front panel opens, then the tape is ejected.
When a cassette tape is not inserted, by pressing the TAPE EJECT button, you can open or close the front panel alternately.

Note:
- The Tape function can be turned ON/OFF with the cassette tape remaining in this product.

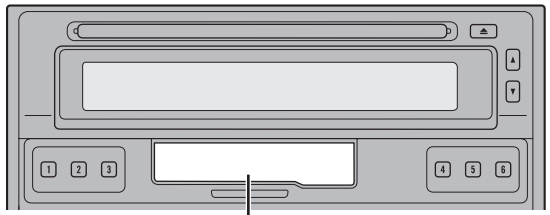


Note:
- The continuous playback time count starts at “00'00"” at the following times.
  * When a tape is inserted.
  * When the tape direction is changed.
  * When you rewind the tape side currently playing back to the beginning.
- The continuous playback time count is halted when fast-forwarding/rewinding and while the Music Search function is operating.

Fast Forward/Rewind and Music Search

- **Each press of the ► button selects Fast Forward or Forward-Music Search.**
  FF (Fast Forward) → F-MS (Forward-Music Search) → Normal Playback
- **Each press of the ◄ button selects Rewind-Music Search.**
  REW (Rewind) → R-MS (Rewind-Music Search) → Normal Playback

Note:
- Fast Forward/Rewind and Music Search can be canceled by pressing the BAND button.



Cassette Loading Slot

If a cassette tape is inserted, the front panel is closed automatically.

Note:
- Indicator “MTL” lights when a metal or chrome tape is inserted. Nothing is displayed for a normal tape.

⚠ WARNING:
- Do not use with the front panel left open. If you do leave it open, it may result in injury in the event of an accident.

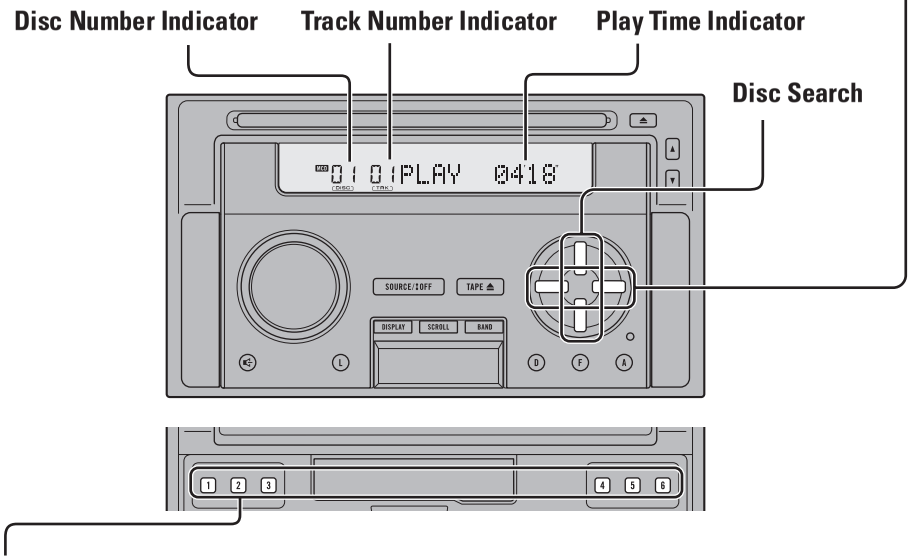
Basic Operation of Multi-CD Player

This product can control a Multi-CD player (sold separately).

Track Search and Fast Forward/Reverse

- **You can select between Track Search or Fast Forward/Reverse by pressing the ◄/► button for a different length of time.**

Track Search	0.5 seconds or less
Fast forward/Reverse	Continue pressing



Disc Number Search (for 6-Disc, 12-Disc types)

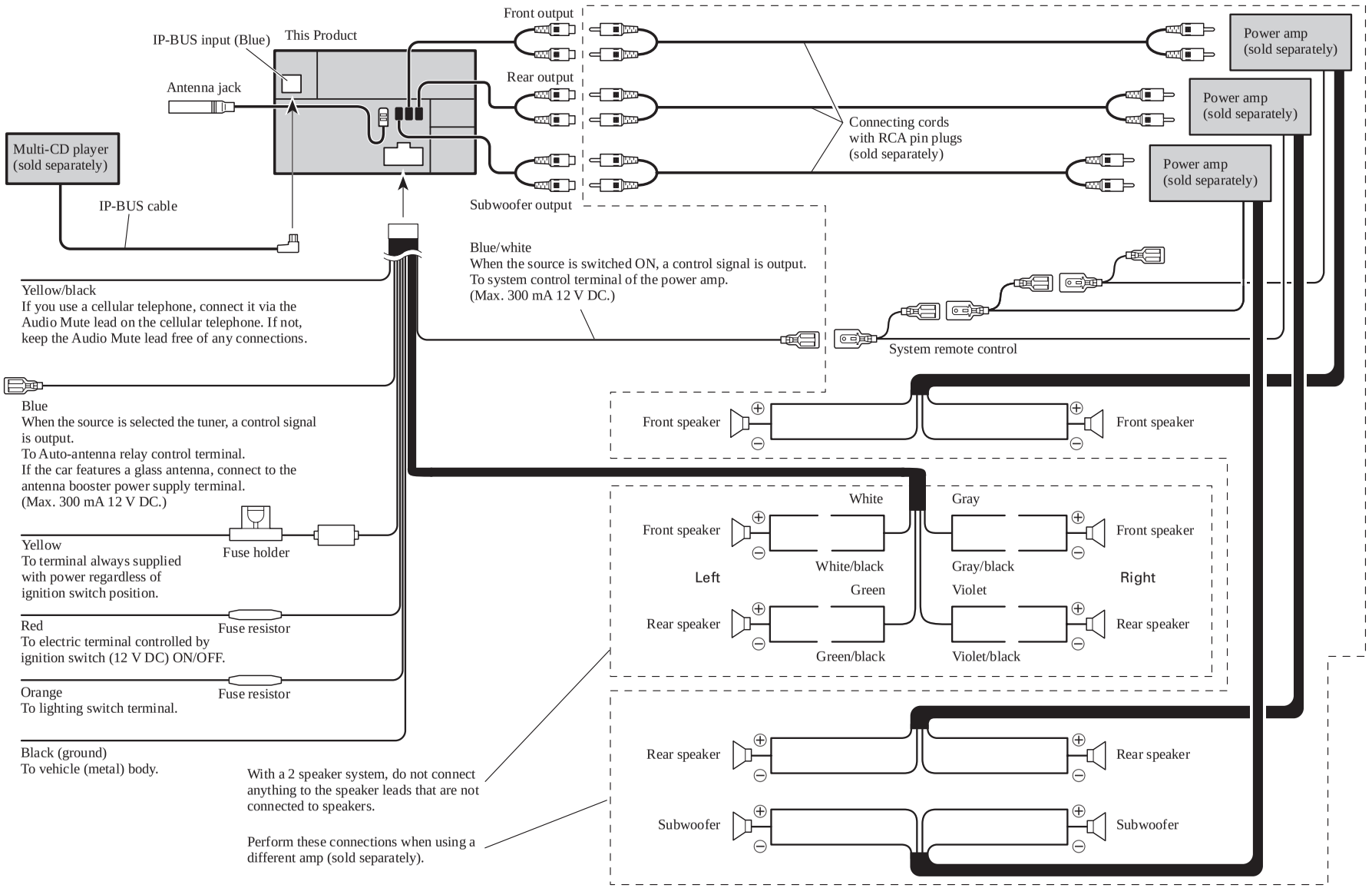
- **You can select discs directly with the 1 to 6 buttons. Just press the number corresponding to the disc you want to listen to.**

Note:
- When a 12-Disc Multi-CD Player is connected and you want to select disc 7 to 12, press the 1 to 6 buttons for 2 seconds or longer.

Note:
- The Multi-CD player may perform a preparatory operation, such as verifying the presence of a disc or reading disc information, when the power is turned ON or a new disc is selected for playback. “READY” is displayed.
- If the Multi-CD player cannot operate properly, an error message such as “ERROR-14” is displayed. Refer to the Multi-CD player owner’s manual.
- If there are no discs in the Multi-CD player magazine, “NO DISC” is displayed.

Connection Diagram

● FH-P8800/UC



Specifications

General

Power source 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Dimensions
(chassis) 178 (W) x 100 (H) x 160 (D) mm
[7 (W) x 3-7/8 (H) x 6-1/4 (D) in]
(nose) ..... 170 (W) x 95 (H) x 32 (D) mm
[6-3/4 (W) x 3-3/4 (H) x 1-1/4 (D) in]
Weight ..... 3.0 kg (6.6 lbs)

Audio/DSP

Continuous power output is 22 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 45 W x 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout maximum output level/
output impedance ..... 2 V/1 kΩ
Loudness contour +10 dB (100 Hz), +7 dB (10 kHz)
(volume: –30 dB)
Equalizer (13-Band Graphic Equalizer)
Frequency ..... 50/80/125/200/315/500/800 Hz
1.25/2/3.15/5/8/12.5 kHz
Equalization range ..... ±12 dB
Subwoofer output
Frequency ..... 50/80/125 Hz
Slope ..... –18 dB/oct.
Gain ..... ±12 dB

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format ..... Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Frequency characteristics .... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio 92 dB (1 kHz) (IHF-A network)
Dynamic range ..... 91 dB (1 kHz)
Number of channels ..... 2 (stereo)

Cassette player

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed 4.76 cm/sec. (+0.14cm/sec.,-0.05cm/sec.)
Fast forward/rewinding time Approx. 100 sec. for C-60
Wow & flutter ..... 0.09% (WRMS)
Frequency response Metal: 30 – 19,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
Metal: Dolby B NR IN: 67 dB (IHF-A network)
Dolby NR OUT: 61 dB (IHF-A network)

FM tuner(FH-P8800/UC)

Frequency range ..... 87.9 – 107.9 MHz
Usable sensitivity
..... 10 dBf (1.0 mV/75 W, mono, S/N: 30 dB)
50 dB quieting sensitivity 15 dBf (1.7 mV/75 W, mono)
Signal-to-noise ratio ..... 70 dB (IHF-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)
Selectivity ..... 70 dB (2ACA)
Three-signal intermodulation
(desired signal level) ..... 30 dBf
(two undesired signal level: 100 dBf)

FM tuner(FH-P8800/ES)

Frequency range ..... 87.5 – 108 MHz
Usable sensitivity ..... 10 dBf
(1.0 mV/75 W, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 15 dBf
(1.7 mV/75 W, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

AM tuner(FH-P8800/UC)

Frequency range ..... 530 – 1,710 kHz (10 kHz)
Usable sensitivity ..... 18 mV (S/N: 20 dB)
Selectivity ..... 50 dB (±10 kHz)

AM tuner(FH-P8800/ES)

Frequency range ..... 531 – 1,602 kHz (9 kHz)
530 – 1,710 kHz (10 kHz)
Usable sensitivity ..... 18 mV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)
50 dB (±10 kHz)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.